DOCUMENT RESUME

ED 322 953 JC 900 443

AUTHOR	Shearon, Ronald W.; And Others
TITLE	Student Diversity and the Emerging Workforce: The Changing Profile of Students in North Carolina Community Colleges.
INSTITUTION	North Carolina State Univ., Raleigh. Dept. of Adult and Community Coll. Education.
SPONS AGENCY	North Carolina State Board of Community Colleges, Raleigh.; North Carolina State Dept. of Community Colleges, Raleigh.
PUB DATE	Jun 90
NOTE	232p.; The appended survey instrument contains small print.
PUB TYPE	Reports - Research/Technical (143) -- Statistical Data (110) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	Academic Education; Access to Education; *Community Colleges; Continuing Education; Educational Needs; *Enrollment Trends; Longitudinal Studies; Population Trends; Questionnaires; State Surveys; Student Attitudes; *Student Characteristics; Student Interests; Two Year Colleges; *Two Year College Students
IDENTIFIERS	*North Carolina

ABSTRACT

Information is provided on trends in the characteristics of students attending North Carolina's community colleges. Chapter 1 discusses the issues of extending opportunities to a diverse student population and developing a capable workforce, and explains the purposes and need for the present study. Chapter 2 presents the methods and procedures used in the study, which involved a survey of 16,196 students enrolled in 58 community colleges during fall 1988 and an analysis of other data derived from previous studies, census reports, and statewide reports. Chapters 3 through 5 highlight changes that have occurred in student profiles from 1968 to 1988, including trends in curriculum and continuing education students and enrollment changes compared with changes in the state's adult population. Chapter 6 provides a comprehensive profile of the students enrolled in fall 1988, while chapter 7 looks at the characteristics of students in college transfer, general, technical, and vocational education programs in terms of their demographic, socioeconomic, academic, and attendance characteristics. Chapter 8 profiles continuing education students in the academic, preparatory, avocational, occupational, and practical skills programs. Finally, chapters 9 and 10 offer a summary of findings, conclusions, and a discussion of implications. The survey instrument and additional information about study methodology are appended. (GFW)

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ED322953

Student Diversity and the Emerging Workforce

The Changing Profile of Students in North Carolina Community Colleges

Ronald W. Shearon
Irene A. Brownlee
David N. Johnson

June, 1990

This study was conducted by the
Department of Adult and Community College Education,
North Carolina State University
and sponsored by the
North Carolina State Board of Community Colleges
and the North Carolina Department of Community Colleges
Raleigh, North Carolina

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Printed in the U.S.A.

Published by the Department of Adult and Community College Education
North Carolina State University
Raleigh, NC 27695
Phone: (919) 737-3590

Acknowledgements

Gratitude is expressed to the many individuals who contributed to this study including the presidents, faculty, and students of the 58 community colleges in North Carolina. Special appreciation goes to the following:

- John A. Forlines, Jr., Chairman, North Carolina State Board of Community Colleges, for the board's financial support and encouragement.

- Robert W. Scott, President, North Carolina Community College System, for his leadership in obtaining financial support and his encouragement.

- Edward H. Wilson, Jr., Executive Vice President, North Carolina Department of Community Colleges, for his timely support and encouragement in every aspect of the study.

- Thomas C. King, Jr., Vice President, Finance, North Carolina Department of Community Colleges, for his support and assistance in managing the study budget.

- The 58 college research coordinators for managing the data collection at the local colleges. Appendix B lists their names.

- The Profile Project Steering Committee for guidance, direction, and encouragement: Leigh H. Hammond, Vice President, North Carolina Department of Community Colleges; Marvin R. Joyner, President, Central Carolina Community College, Sanford, NC; John Quinley, Director, Institutional Research, Central Piedmont Community College, Charlotte, NC; Sanford C. Shugart, Vice President, North Carolina Department of Community Colleges; Janice Kennedy-Sloan, Vice President, North Carolina Department of Community Colleges; and Kathryn Baker Smith, Associate Vice President for Planning and Research, North Carolina Department of Community Colleges.

- Edgar J. Boone, Head, Department of Adult and Community College Education, North Carolina State University, for his continuing personal, professional, and administrative support.

Acknowledgements

- Joan J. Michael, Dean, College of Education and Psychology, North Carolina State University, for her support and encouragement.

- Durward F. Bateman, Dean, College of Agriculture and Life Sciences, North Carolina State University, for his support and encouragement.

- Robert G. Templin, Jr., President, Thomas Nelson Community College, Hampton, VA, for his continuing personal and professional support and encouragement. President Templin served as the primary project consultant on the research design, problem conceptualization, and preparation of the final report. His contributions to the research team were invaluable.

- Faye L. Childers, Ben E. Fountain, Jr., Stephen C. Lilley, R. David Mustian, Charles H. Proctor, Laura I. Rendon, and Terrence A. Tollefson of North Carolina State University for their support, encouragement, and technical assistance.

- Cassandra Atkinson, Marjorie W. Edwards, Janet Lewis, Elaine J. Murray, Rebecca N. Sherrill, and N. Ruth Shultz of North Carolina State University for their administrative and secretarial assistance.

- Steve Thornburg, President, Cleveland Community College, Shelby, NC, for assistance in developing the survey instrument.

- The authors' spouses--Carolyn, David, and Betty Lynne--for their love, patience, sacrifice, encouragement, and support during the study.

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Preface

The North Carolina Community College System celebrated its 25th anniversary during 1988. On May 17, 1963, the General Assembly passed into law the bill that created the North Carolina Community College System. Over the past 25 years the number of colleges has grown to 58, making education accessible to each North Carolina adult. Curriculum and continuing education programs, and support services have expanded to help students learn basic literacy skills, to receive the first two years of a college education, to earn a high school diploma, and to train for jobs. Trustees, administrators, faculty, and counselors have responded to the needs from their communities for job training, general education, and community services. The North Carolina State Board of Community Colleges and the Department of Community Colleges have experienced increased expectations for leadership, financial resources, and managerial support services from community college administrators, their trustees, and the North Carolina General Assembly. In February 1989, the Commission on the Future of the North Carolina Community College System in "Gaining the Competitive Edge: The Challenge to North Carolina's Community Colleges" called for major changes and made 33 recommendations to help the system position itself for a capable workforce in the year 2000 and to help the people of North Carolina gain the competitive edge in society and the marketplace.

During the past 25 years, the North Carolina Department of Community Colleges has prepared annual reports and supported several studies of student profiles to help determine the need for changes in policies, programs, and support services from the student's perspective. Bolick (1969) and Phillips (1970) surveyed credit and noncredit students during the early years of the system. Approximately five years later, Shearon and associates (1976) surveyed and profiled both credit and noncredit students enrolled in the system in 1974. Between 1974 and 1979 student enrollments increased substantially and the characteristics of the students changed so much that it was no longer adequate to make decisions based on information collected from students in 1974. Thus, another study was done by Shearon and associates (1980) on a sample of all curriculum and continuing education students enrolled in 1979. While preparing for the 25th anniversary celebration and anticipating the report from the Commission on the Future, President Robert W. Scott of the North Carolina Community College System provided the leadership for updating the student profile studies. Again, the North Carolina Department of Community Colleges contracted with the Department of Adult and Community College Education, North Carolina State University, to update the previous student profile studies.

The current study is organized into five sections. Part I, Introduction has two chapters: Chapter 1, Positioning Community Colleges for Student Diversity and the

Workforce, and Chapter 2, Study Design. Part II, The Changing Community College Student Profiles highlights changes that have occurred in profiles of students from 1963 to 1988. Part II has three chapters: Chapter 3, Profile Changes in the Curriculum Student Population; Chapter 4, Profile Changes in the Continuing Education Student Population; and Chapter 5, Student Enrollment Changes and Comparisons with the North Carolina Adult Population. Part III, Profiles of Currently Enrolled Community College Students contains three chapters. Chapter 6, Profiles of Curriculum and Continuing Education Students provides comprehensive descriptions based on a sample of 16,196 students enrolled in the 58 community colleges during the fall quarter of 1988. Chapter 7, Profiles of Curriculum Students Within Program Areas provides profiles of students enrolled in the college transfer, general, technical, and vocational education areas in terms of their demographic, socioeconomic, academic, and attendance characteristics. Chapter 8, Profiles of Continuing Education Students Within Program Areas presents profiles of students in the academic, preparatory, avocational, occupational, and practical skills education areas in terms of their demographic, socioeconomic, academic, and attendance characteristics. Part IV, Summary and Conclusions contains two chapters: Chapter 9, Summary of Research Findings; and Chapter 10, Conclusions and Implications. Part V, Appendices consists of eight sections which help the reader further understand and interpret the technical aspects of the study.

The study findings are disseminated through this comprehensive report and an executive summary. Each of the 58 college research coordinators has already received the results for the students participating in the study from their respective community colleges. Journal articles, special reports, and presentations will be provided during the coming months.

This report was prepared for the State Board of Community Colleges, the Department of Community Colleges, and the 58 community colleges in the North Carolina Community College System. The authors believe that the study findings, conclusions, and implications will be useful to policy makers, administrators, faculty, counselors, and students as decisions are made to help position community colleges for extending opportunities to a more diverse student population, for helping to build a capable workforce, and for helping the people of North Carolina to gain the competitive edge in the marketplace and the ability to function in society.

The Authors

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EXECUTIVE SUMMARY
WHAT ARE THE REASONS FOR THE STUDY?

The Commission on the Future of the North Carolina Community College System (1989) has called for major shifts in programs, funding, and governance of the system. According to the Commission, "too few of the adults most in need of community college education are recruited, enter, progress through and graduate from the system" (p. 13). Two issues that are very important to North Carolina community colleges are: (1) extending educational opportunities to a diverse adult population and (2) helping to build a capable workforce for the information age and era of global competition. The resolution of these two issues is essential if North Carolinians are to have a chance at gaining the competitive edge in the marketplace.

This extensive study of community college students was designed to provide a knowledge base for policy makers, administrators, and faculty for use in assessing the extent to which the system is positioning itself to extend educational opportunities to a diverse student population and the building of a capable workforce. Some key questions examined in this study were:

- How have student profiles changed over the past 25 years?
- Who attends community colleges?
- Why do students attend community colleges?
- What factors are related to students attending community colleges?
- Are students representative of the adult population of North Carolina?
- Are students satisfied with their community college experience?
- What are the students' plans for employment and further education?

During the fall quarter of 1988, a sample of 16,196 students enrolled in 58 North Carolina community colleges responded to a 50-item questionnaire. Comparative data were derived from previous studies, census reports, and reports published by the North Carolina Department of Community Colleges. Some of the major findings, conclusions and implications are reported in this Executive Summary.[1]

---

[1] The findings reported herein were excerpted from *Student Diversity and the Emerging Workforce: The Changing Profile of Students in North Carolina Community Colleges* by Ronald W. Shearon, Irene A. Brownlee, and David N. Johnson (1990).

HOW HAVE STUDENT PROFILES CHANGED OVER THE PAST 25 YEARS?

A major objective of this study was to update prior studies of curriculum and continuing education students. The profile changes in the curriculum student population between the 1968, 1974, 1979, and 1988 studies are described in terms of selected demographic, socioeconomic, and attendance characteristics. The profile changes in the continuing education student population between the 1969, 1974, 1979, and 1988 studies are described according to the same characteristics.

Curriculum Student Profile Changes

- Women comprised a majority of curriculum students in North Carolina community colleges. Their percentages have increased from 32 percent in 1968 to 62 percent in 1988 (Figure 1).

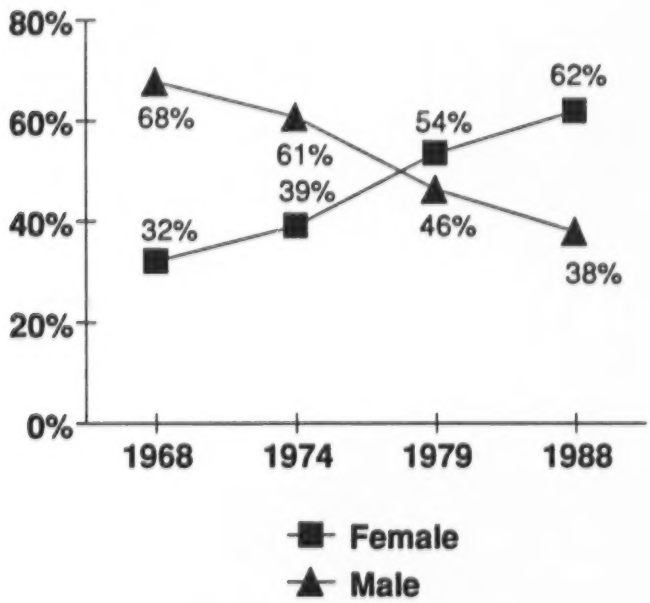

Figure 1. Distribution of curriculum students enrolled in North Carolina community colleges during the years of 1968, 1974, 1979, and 1988, by sex

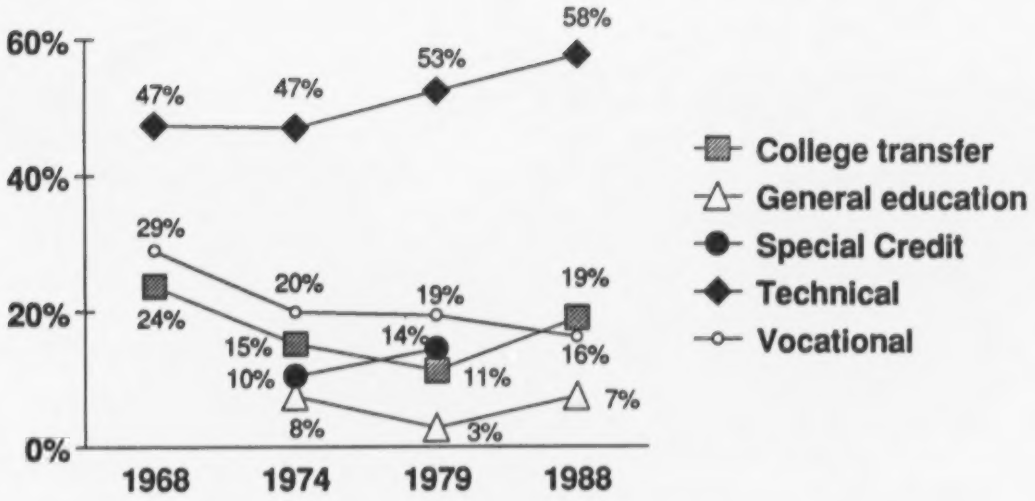

Figure 2. Distribution of curriculum students enrolled in North Carolina community colleges during the years 1968, 1974, 1979, and 1988, by program area

- The majority of students were enrolled in technical education programs and the percentages have increased from 47 percent in 1968 to 58 percent in 1988, while the proportions of vocational education students have decreased from 29 to 16 percent. The college transfer student enrollment proportion increased from 11 percent in 1979 to 19 percent in 1988 (Figure 2).

- Overall, the proportion of black students has increased since 1968; yet, the percentage decreased from 21 percent in 1976 to 17 percent in 1988.

- Students are becoming older; however, there was a resurgence of 17 and 18 year-old students in 1988. The percentage of students in the 19 to 29 age categories has decreased, while the percentage in the 30 to 50 and older categories has increased.

- Since 1974 the percentage of single students has increased from 44 to 48 percent, while married students have decreased from 51 to 40 percent.

- The trend has been for increasingly higher proportions of students to be employed while enrolled in classes. In 1968, 54 percent of the students were employed compared to 75 percent in 1988.

- Most students attended classes during the day, although the percentages have dropped from 84 percent in 1968 to 57 percent in 1988. Evening attendance has increased from 16 percent to 43 percent in the same time period.

- The percentage of students with postsecondary education experience has increased from 24 percent in 1968 to 54 percent in 1988, while the percentage of high school graduates has dropped from 69 percent to 42 percent.

Continuing Education Student Profile Changes

- Women are the majority of continuing education students in North Carolina community colleges. Their percentages have increased from 60 percent in 1969 to 65 percent in 1988.

- The proportions of nonwhite continuing education students have increased from 20 percent in 1969 to 25 percent in 1988.

- Continuing education students are becoming older. The percentage of students 30 years of age and older increased from 57 percent in 1969 to 71 percent in 1988. There was a slight increase in the 19 or younger age category from 6 percent in 1979 to 9 percent in 1988.

- Most continuing education students are married, although the percentages have decreased from 72 percent in 1969 to 56 percent in 1988.

- A majority of all continuing education students have a high school education or less, yet the percentages have decreased from 80 percent in 1969 to 61 percent in 1988. Conversely, the percentages of students with some postsecondary education have increased from 20 percent in 1969 to 39 percent in 1988.

- Most continuing education students were employed either full or part-time but the percentages have been decreasing from 75 percent in 1969 to 57

percent in 1988. The trend for the unemployed or other category has been increasing from 25 percent in 1969 to 43 percent in 1988.

- Two thirds of continuing education students would not have attended another institution, yet this percentage has decreased from 72 percent in 1969 to 65 percent in 1988.

- The majority of continuing education students attended evening classes; however, the percentages have been decreasing from 86 percent in 1969 to 60 percent in 1988.

WHO ATTENDS COMMUNITY COLLEGES?

Students attending North Carolina's community colleges are as diverse as the communities in which they live. In recognition of the diversity in their demographic, socioeconomic, academic, and attendance characteristics, no single "typical" student profile is presented here. A typical curriculum student profile is provided with subprofiles of the following programs: college transfer, general education, technical education, and vocational education. The typical continuing education student profile is accompanied by subprofiles based on the students enrolled in the programs of academic, preparatory, avocational, occupational, and practical skills education. These student profiles represent an averaging of student characteristics that may not reflect the true diversity in the students, but may offer useful generalizations.

The Typical Curriculum Student

The typical curriculum student is a 29-year-old, white single female who views herself or one of her parents as the head of the household. She is a high school graduate and may have one year of postsecondary experience. Her parents have completed high school or some postsecondary education. She works full-time, receives no financial aid, and is likely to have an annual income of less than $25,000.

This student attends college part-time and is most likely enrolled in a technical program. She attends day classes on the community college's main campus, enrolling in one to three courses. This student travels ten miles or less to class making from two to five trips to class per week. The community college she attends is her preferred institution to attend. However, if that institution did not exist she would have attended

elsewhere. Her primary graduation intention is to earn an associate degree in a career program.

Her major reasons for continuing her education are to earn more money and get a better job. She does plan to work in North Carolina.

The College Transfer Student

The typical college transfer student is a 25-year-old, single white female who reports her father as the head of the household. She is likely to have some postsecondary education and her parents are high school graduates. Employed either full or part-time, her 1987 income was likely to be less than $15,000.

This college transfer student is most likely enrolled part-time, attending classes in the morning on the main campus, and enrolled in one to three courses per quarter. She is enrolled in her first or second quarter and travels ten miles or less to attend classes. She prefers to be enrolled in a public four-year college or university. Her primary education goal is to prepare for transfer to a four-year college.

Her major reasons for continuing her education are to earn more money and to get a better job. She is likely to work in North Carolina.

The General Education Student

The typical general education student is a 33-year-old, single or married white female who designates herself or her spouse as head of the household. She is most likely to have attended a postsecondary education institution and her parents have completed high school and possibly have attended a postsecondary education institution. This student works full-time and her 1987 income is likely to be over $10,000.

A part-time student, she attends classes during the day on the main campus, enrolling in one or two courses. Enrolled for one to three quarters, she travels ten miles or less to class. She prefers to attend the local community college and her primary education goals are to prepare for transfer to a four-year college and for self-enrichment. Her major reasons for continuing her education are to earn more money and to learn more things of interest.

The Technical Education Student

The typical technical education student is a 30-year-old single or married, white female who reports herself or her spouse as the head of household. She is a high school graduate and may have some postsecondary education. Employed full-time, she reports a 1987 income of more than $15,000.

This part-time student attends classes in the evening or morning on the main campus and is enrolled in one or two courses. Enrolled for one to three quarters, she travels ten miles or less to class. She prefers to attend the local community college and her primary education goals are to prepare for a different job or update and improve skills for a current job.

Her major reasons for continuing her education are to earn more money and to get a better job. She plans to work in North Carolina.

The Vocational Education Student

The typical vocational education student is a 30-year-old, white male who is likely to be single or married. He is head of the household, employed full-time, and reports a 1987 income of less than $25,000.

He is a high school graduate. A part-time student, he attends day classes on the main campus, enrolling for one or two courses. Enrolled for one or two quarters, he travels ten miles or less to class. He prefers to attend the local community college. His primary education goals are to prepare for a different job or update and improve skills for a current job. He intends to receive a diploma or certificate in a career program.

His major reasons for continuing his education are to earn more money and to get a better job. He plans to work in North Carolina.

The Typical Continuing Education Student

The typical continuing education student is a 44-year-old, white married female who lives with her spouse and children, and considers herself or her spouse as the head of the household. She is a high school graduate whose parents probably did not graduate

from high school. This student is likely to be employed full-time reporting a primary income of between $10,000 and $40,000.

This continuing education student is likely to be enrolled in the occupational program area, taking one course in the evening, at an off-campus site. Enrolled in her first or second quarter at this institution, she is likely to travel five or fewer miles to class making one or two trips a week. The community college she attends is her preferred institution to attend. If that institution did not exist she would not have attended another institution. Her primary education goal is for self-enrichment and she desires to complete selected courses, but does not intend to graduate. Her major reasons for continuing her education are to learn new things of interest and to earn more money.

The Academic Education Extension Student

The typical academic education extension student is a 53-year-old, married white female who lives with her spouse. She is likely to be the head of household, working full-time or having a retired status.

This academic education student is likely to have some postsecondary education. She is enrolled in one course for self-enrichment that meets in the evening at an off-campus site. The course location is within five miles of the student's residence or place of work.

The Preparatory Education Student

The typical preparatory education student is a 34-year-old, single nonwhite female. She may be the head of household and works full-time.

This student has less than an eleventh grade education. Enrolled in her first or second quarter at this institution, she is taking one course to improve basic skills that meets during the day at an off-campus site. The course location is within five miles of the student's residence or place of work.

The Avocational Education Student

The typical avocational education student is a 58-year-old, married white female who resides with her spouse. Her spouse is likely to be the head of household, while she has a retired employment status.

The typical avocational education student has graduated from high school and may have some college. Enrolled in one course for self-enrichment that meets during the day at an off-campus site, she is likely to have been enrolled for more than five quarters at this institution. The course location is within five miles of the student's residence or place of work.

The Occupational Education Student

The typical occupational education student is a 36-year-old, married white female who resides with her spouse and/or children. She is likely to be the head of household and to be employed full-time.

Enrolled in her first or second quarter at this institution, she has graduated from high school and may have some postsecondary education. To update or improve skills for her current job she is enrolled for one course that meets in the evening probably on the main campus. The course location is within ten miles of the student's residence or place of work.

The Practical Skills Education Student

The typical practical skills education student is a 62-year-old, married white female who resides with her spouse. She is the head of household and retired.

This student has graduated from high school and may have some postsecondary education. Likely to have been enrolled for more than five quarters at this institution, she is enrolled in one course that meets during the day at an off-campus site for self-enrichment. The course location is within ten miles of the student's residence or place of work.

WHY DO STUDENTS ATTEND COMMUNITY COLLEGES?

Adults attend community colleges for many reasons. This study examined why students were attending community colleges in terms of reasons, educational goals, influence of institutional characteristics, and their graduation intentions.

Reasons for Continuing Their Education

When students were asked to rank their reasons for continuing their education, major differences were observed between curriculum and continuing education students:

- Curriculum students ranked "to earn more money" first and "to get a better job" second, except general education students who ranked "to learn more things of interest" as their second reason.

- Continuing education students ranked "to learn more things of interest" first and "to earn more money" second. Academic, avocational, and practical skills students ranked "to learn more things of interest" first, while students in preparatory and occupational programs ranked "to earn more money" first.

Educational Goals

When students were asked to identify their primary educational goal while attending this college they responded as follows:

- Curriculum students were primarily interested in job preparation (55 percent) and transferring to a four-year college (21 percent). Two thirds of college transfer students wanted to transfer to a four-year college as did 38 percent of the general education students.

- Continuing education students were primarily interested in self-enrichment (43 percent) and job preparation (34 percent).

Influence of Institutional Characteristics

When students were asked to rank five of thirteen characteristics of their community college that influenced them most in deciding to attend, curriculum and continuing education students ranked the same top five characteristics in the same order of influence. They were as follows:

- Educational programs or courses available
- Location--nearness to home or work
- Low cost
- Convenient class schedule
- Quality of instruction

Graduation Intentions

Students were asked to specify their primary graduation intention while attending this college and their responses were as follows:

- Curriculum students planned to earn the associate degree in a career program (36 percent) or college transfer program (17 percent). Approximately 24 percent did not intend to graduate.

- Continuing education students planned to complete selected courses and did not intend to graduate (68 percent), and 18 percent intended to earn a high school diploma or equivalent.

WHAT FACTORS ARE RELATED TO STUDENTS ATTENDING COMMUNITY COLLEGES?

Students attend community colleges under many circumstances. This study examined the following factors which were related to attending a community college.

Time of Attendance

Students were asked to indicate when they actually attended and preferred to attend most of their classes. Their responses were as follows:

- Curriculum students attended most of their classes in the morning (47 percent) and the evening (43 percent), while 53 percent preferred morning classes compared to 33 percent in the evening. Very few students attended classes in the afternoon or the weekend.

- Continuing education students attended classes in the evening (60 percent) and in the morning (27 percent), while 54 percent preferred evening classes compared to 32 percent in the morning. Seventy-three percent of academic education and 81 percent of occupational education students attended classes in the evenings.

Location of Classes

Students were asked to indicate where they attended most of their classes and their responses were as follows:

- A substantial proportion of curriculum students attended classes on the main campus (81 percent).

- Continuing education students attended most of their classes at off-campus sites (41 percent) and the main campus (36 percent).

Distances Traveled to Classes

When students were asked to indicate the distance usually traveled one-way to attend classes, they responded as follows:

- Curriculum students traveled 15 or fewer miles one way to class (73 percent) and 62 percent made more than two trips to class each week. More than half the curriculum students traveled 10 or fewer miles to classes they attended.

- Continuing education students traveled 10 or fewer miles one way to class (72 percent). Slightly more than half the continuing education students traveled 5 or fewer miles to classes.

Employment Status

Students were asked to indicate their primary employment status and the responses were as follows:

- Seventy-five percent of curriculum students were employed full-time (48 percent) or part-time (27 percent).

- Fifty-seven percent of continuing education students were employed full-time (47 percent) or part-time (10 percent).

ARE STUDENTS REPRESENTATIVE OF THE ADULT POPULATION OF NORTH CAROLINA?

Community colleges are often called "the people's college" or "everybody's college." To what extent do students come from all segments of the adult population? The following major research findings are based on the study and comparative data:

- In North Carolina community colleges curriculum and continuing education programs served disproportionate numbers of women and men. In comparison to the adult population, women were over-represented and men were under-represented in both student groups (Figure 3).

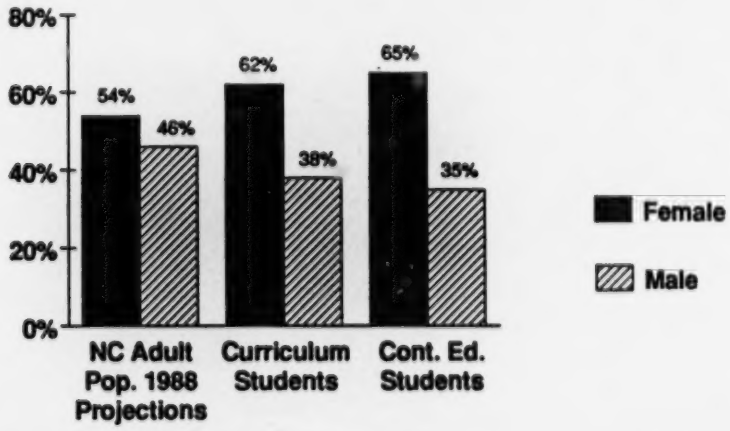

Figure 3. Distribution of adults in North Carolina's population as compared to students enrolled in North Carolina community colleges, 1988 by sex

- In terms of race, both curriculum and continuing education programs were approximately representative of a cross-section of the state's adult population, with the exception of black curriculum students who were under-represented (Figure 4).

- Curriculum students were not representative of the adult population in terms of age--older adults were under-represented in these programs, whereas younger students were over-represented. Continuing education enrollments were representative of all major age groups in the state's adult population (Figure 5).

- Adults with less than a high school education were under-represented in the curriculum program area, whereas high school graduates and students with one to three years of postsecondary education were over-represented. Within the continuing education program area students appeared to mirror the education levels of the adult population (Figure 6).

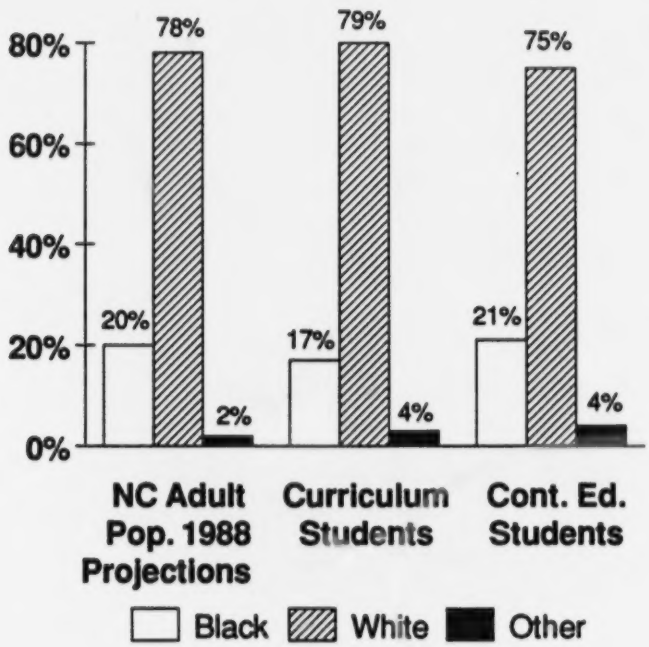

Figure 4. Distribution of adults in North Carolina's population as compared to students enrolled in North Carolina community colleges, 1988, by race

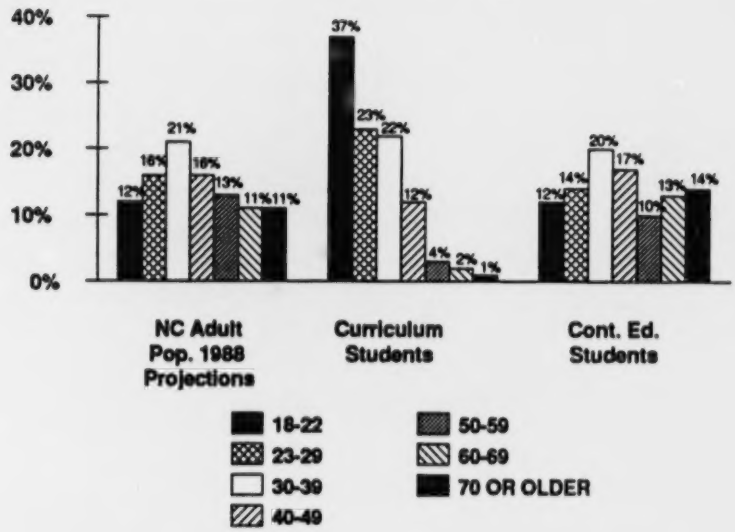

Figure 5. Distribution of adults in North Carolina's population as compared to students enrolled in North Carolina community colleges, 1988, by age of students

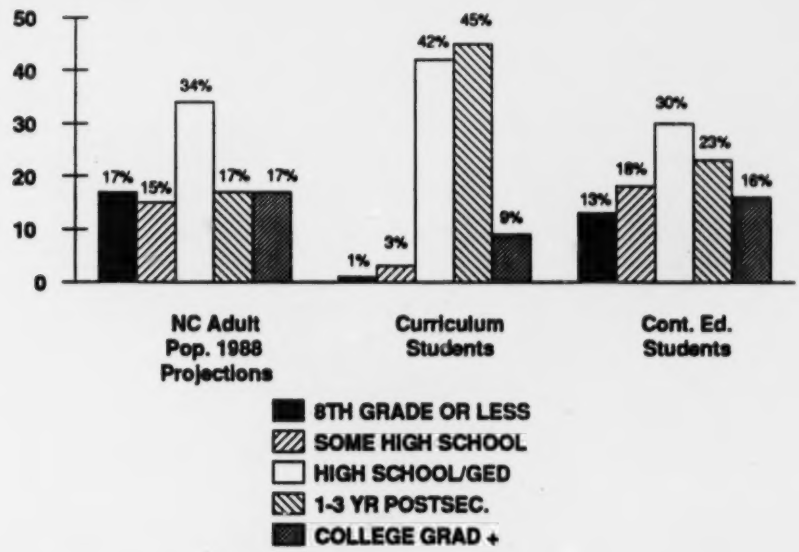

Figure 6. Distribution of adults in North Carolina's population as compared to students enrolled in North Carolina community colleges, 1988, by student's level of education

- Curriculum and continuing education students appeared to be representative of the adult population when considering primary income (income of household when student, spouse, or parents were head of household).

- When considering the occupation of head of household for both student groups, the executive and administrative occupational groups were over-represented, whereas the sales and machine operator occupation groups were under-represented.

ARE STUDENTS SATISFIED WITH THEIR COMMUNITY COLLEGE EXPERIENCE?

Students were asked to indicate their satisfaction with the quality of services and facilities, and whether they would recommend this college to a friend. The major findings were as follows:

- Most curriculum students were satisfied with the college's overall image (86 percent) and the quality of education (83 percent). Also, most curriculum students were satisfied with classrooms, shops, and labs; the library; and the student center and lounge area.

- Among continuing education students, 77 percent indicated they were satisfied with the quality of instruction and 72 percent were satisfied with the college's overall image.

- Most students would recommend the college in which they were enrolled to a friend. Ninety-nine percent of curriculum students and 98 percent of continuing education students responded they would recommend their college to their friends.

WHAT ARE STUDENTS' PLANS FOR EMPLOYMENT AND FURTHER EDUCATION?

Students were asked to indicate what they planned to do upon completion of the program or course in which they were enrolled. Their plans were as follows:

- Seventy-seven percent of curriculum students planned to work in North Carolina (49 percent) or the area the college serves (28 percent). Slightly more than 50 percent of the continuing education students planned to work in North Carolina. Continuing education students were three times more likely to seek military service, keeping house, retirement or other.

- Nearly 30 percent of curriculum students planned to obtain a bachelor's degree and 30 percent planned to obtain the associate degree. Among continuing education students 18 percent planned to obtain the high school diploma or GED. Sixteen percent of continuing education students were already college graduates compared to 9 percent of curriculum students.

WHAT ARE THE MAJOR CONCLUSIONS AND IMPLICATIONS?

The major conclusions and implications of this study of community college student characteristics are presented to help North Carolina community college policy makers, administrators, and faculty assess the extent to which the system is positioning itself to extend opportunities to a diverse student population and to prepare a capable workforce. The North Carolina Commission on the Future emphasized that the resolution of these two issues was important in order for North Carolinians to gain the competitive edge. These conclusions and implications are based on a comprehensive study of students being served, changes in student profiles over the past 25 years, and comparisons between students enrolling in community colleges and the North Carolina adult population.

Conclusion 1: An enrollment revolution has occurred in North Carolina's community colleges over the past 25 years.

- It is imperative that a responsive educational environment be maintained in North Carolina community colleges and that high priority be given to the needs and concerns of women.

- A variety of counseling programs and services are needed to address needs and concerns of women.

Conclusion 2: When viewed against the backdrop of the state's increasing technological demands in the economy, it appears that North Carolina's community colleges are contributing to the development of a new technology-based work force. However, declining enrollment trends in traditional vocational fields raise some questions regarding the education of tomorrow's skilled craftspersons.

- More attention needs to be given to the needs and demands of a new technology-based workforce which community colleges are dedicated to serving.

- Improved articulation between community colleges, high schools, and businesses and industries would result in less duplication of effort and more efficiency.

- Need to establish a special employer-college liaison office.

- Need to develop more of the new and integrated 2 + 2 + 2 tech/prep/ associate degree/bachelor of technology degree programs.

Conclusion 3: North Carolina community colleges serve most segments of the adult population through comprehensive educational programs and services with some exceptions.

- As North Carolina community colleges continue to provide educational opportunities to a cross-section of the adult population, the continuing education program area is essential. Without continuing education programs, North Carolina community colleges would not serve all segments of the adult population.

- Community colleges must improve their effectiveness in recruiting students who have less than a high school education if they are to position themselves for extending opportunities to a diverse population and to develop a more capable workforce.

Conclusion 4: There continues to be a persistent gap between North Carolina's community college enrollments and some at-risk groups including low income, low skilled, and educationally disadvantaged people.

- Minority leaders need to be employed in senior leadership positions to send a clear message that cultural diversity is valued.
- Tracking achievements of the at-risk students will be essential.
- More financial aid will be needed.
- Bridge programs including tutoring, learning laboratories, collaborative groups, and intensive advising will be needed.
- Colleges must reward good teaching.

Conclusion 5: North Carolina's community colleges are increasingly serving a more diverse adult student population.

- Community colleges must do more than provide for student assistance or institutional accommodations with regard to student diversity. In a broader effort to "organize for diversity" they must diversify faculty and staff; embrace a mission and values that include diversity; select curriculum content, styles of teaching, and modes of assessment that encompass diversity; embrace conflict as a natural part of creating a pluralistic community; involve students; and demonstrate that there is no conflict between quality and diversity.
- With older students enrolling in higher proportions, community colleges will need to give more emphasis to faculty development and continuing education, particularly in the area of developmental tasks throughout the lifespan.

Conclusion 6: North Carolina's community colleges serve primarily their local communities and provide postsecondary educational opportunities to people who otherwise would not attend college.

- If the community college system intends to extend opportunities to a more diverse student population, then classes will need to be more accessible both geographically and economically.

- Continue the good work being done. Ninety-eight percent of the respondents would recommend their college to a friend.

PART I: INTRODUCTION

The Commission on the Future of the North Carolina Community College System in "Gaining the Competitive Edge: The Challenge to North Carolina Community Colleges" (1989) concluded that North Carolina's community colleges have served the adult citizens well for 25 years. The comprehensive two-year college has proved to be a good investment. However, the Commission claimed that the economy, adult education and training needs have changed considerably since 1963 when the system was created, and that the state's community colleges will have to be strengthened and modified. Community colleges were challenged to provide opportunities for all adult North Carolinians to master the basic critical thinking skills demanded in a complex and competitive economy.

Chapter 1--Positioning Community Colleges for Student Diversity and the Workforce serves as the backdrop for the study of student characteristics and how they have changed over the past 25 years. The issues of extending opportunities to a diverse student population and developing a capable workforce are developed along with the rationale for the study. Chapter 2--Study Design presents the methods and procedures used in the study.

Chapter 1
Positioning Community Colleges for Student Diversity and the Workforce

American community colleges have emerged as major players in higher education. Nationally, the number of community, technical, and junior colleges more than doubled between 1936-37 and 1986-87 from 553 to 1,222 (El-Khawas, Carter, & Ottinger, 1988). Student enrollments during the same time period increased over 35 times from 137,000 to 4.8 million in 1986-87. In 1988, there were 1,224 regionally accredited community, technical, and junior colleges enrolling over five million college credit students, while another four million students were enrolled in non-credit adult and continuing education programs (American Association of Community and Junior Colleges, 1988). Community colleges enroll 43 percent of the country's undergraduate student population (El-Khawas et al., 1988). According to Brint and Karabel (1989) for the past decade the majority of all degree-credit students entering higher education have done so in a two-year institution. Community colleges have clearly emerged as an important part of American postsecondary education (Shearon & Tollefson, 1989).

During the period when community colleges experienced such tremendous growth, the role of community colleges also changed. Over the years, two-year colleges have responded to changing social and economic conditions by modifying their mission and by adopting new policies and strategies that can best address student goals and needs (Rendon & Nora, 1989). On a national level, these changes have resulted in a shift from a primary college transfer function to multiple functions that include occupational programs, community services, remedial programs, and continuing education related to life experiences. As two-year colleges, community colleges became less identified with the junior college orientation and evolved into comprehensive, community-based institutions. Comprehensive community colleges serve a diverse student population, provide geographical accessibility, flexibility of scheduling, low-cost programs, and profess a commitment to an egalitarian philosophy of education.

As community colleges face the new century, they enter the decade of the 1990s with a new mandate--building communities. The national Commission on the Future of Community Colleges (1988) defined community "not only as a region to be served, but also as a climate to be created in the classroom, on the campus, and around the world" (p. 49). The commission further noted that new partnerships for learning must be established between students and teachers. The community college must continue to offer all students an open door, and reaffirm to minority students the promise of empowerment through education. A curriculum with coherence needs to be pursued as academic goals are established for literacy, general, technical, and career-related

education, and continuing education programs. Within the classroom, community is created as teachers and students are active partners in the learning process.

North Carolina has a rich history in community college education dating back to the Community College Act of 1963 and earlier. Building on a base of three two-year colleges and 20 Industrial Education Centers, the Department of Community Colleges was initially organized in 1963. Rapid expansion followed and by 1969, there were 54 institutions. The North Carolina Community College System currently contains 58 community colleges, and comprises the third largest community college network in the nation. Student enrollments have grown from 52,870 in 1963-64 to 624,813 in 1987-88 (North Carolina Department of Community Colleges, 1988). Approximately one out of every seven North Carolina adults enrolls annually in one of the state's community colleges. Seventy-eight percent of the total headcount enrollment in postsecondary education was enrolled in North Carolina community colleges (Statistical Abstract of Higher Education in North Carolina, 1985-86).

The North Carolina Community College System merged two forms of public postsecondary education in the state: Industrial Education Centers and junior colleges. Industrial Education Centers, a program which paired private industry and state-supported education, helped students enhance their employment prospects, while junior colleges helped to advance students to higher educational levels. When created the community college system was neither a pure technical training system nor a collection of junior colleges, but rather a network of institutions which provided comprehensive advanced training of students with a wide range of aspirations and needs. However, the system's primary emphasis is on occupational skills training, and over 75 percent of program offerings are in technical and vocational areas (Planning for Our Future, 1988). Thirty-four of the 58 community colleges offer college transfer curricula for 15 percent of the total curriculum student population. As North Carolina's community colleges have responded to changes and sought to be comprehensive, additional functions of remedial and developmental education, community services, and continuing education for occupational, academic, and self-enrichment pursuits were added.

As North Carolina community colleges enter the 1990s they have a new mandate to extend educational opportunities to all adult North Carolinians and to help build a capable workforce. In "Gaining the Competitive Edge: The Challenge to North Carolina's Community Colleges" (1989), the Commission on the Future of the North Carolina Community College System identified this major finding:

> *The system's "open door" philosophy of admission is passive. In an economy that will require dramatic expansions in the size and quality of the workforce, too few of the adults who are most in need of a community college education are recruited, progress through, and graduate from the system; and too few community college graduates advance to the state's four-year universities. (p. 6)*

The community college system will need to make fundamental changes in its policies and practices relative to recruitment of a more diverse student population for the 1990s. Aggressive marketing efforts are needed to reach an increasingly diverse adult population. Community colleges need an up-to-date information base concerning the adult population and projected changes in demographics to help with decisions regarding planning and marketing for targeted groups of potential students. They must continue to identify ways in which they can offer wider and more varied systems of entrances into the learning society (Cross, 1987). Some models for helping all entering students succeed have been developed and open access to quality education is possible (Roueche, Baker, & Roueche, 1987).

Extending Opportunities to a Diverse Student Population

The North Carolina Commission on the Future in "Gaining the Competitive Edge: The Challenge to North Carolina Community Colleges" (1989) identified six major challenges to North Carolina community colleges. These challenges were to:

1. Provide every community college student access to quality teaching and academic support;
2. Establish effective mechanisms to promote accountability and increased flexibility in funding;
3. Provide opportunities for all adult North Carolinians to master the basic critical thinking skills demanded in a complex and competitive economy;
4. Help business and industry adapt to technological change and promote small business development throughout the state;
5. Build strong partnerships with the public schools and the state's universities to establish a comprehensive education system in North Carolina; and
6. Develop strong leadership for the system and its colleges.

For purposes of this study, the focus is on Challenges 1 and 3 since they both are directly concerned with students. Challenge 1 called for providing every community college student access to quality teaching and academic support services. Two key goals inherent in Challenge 1 are: (1) educational advancement for all adult learners, and (2) expanded access to adult education. The third challenge called for providing opportunities for all adult North Carolinians to master the basic critical thinking skills. The key goals included in the third challenge are: (1) to have a workforce with comprehensive basic skills; (2) to reduce the basic skills gap; and (3) to provide exemplary education for the underskilled.

Inherent in these challenges and goals are two key issues of importance to North Carolina community colleges: the need to extend educational opportunities to a diverse adult student population and to help build a capable workforce. These two issues are developed in the following sections, particularly with regard to students and student characteristics. A review of the literature on student access to educational opportunities that emphasizes the diversity of students and the changing demographics is followed by the issue of building a capable workforce.

Student Access to Educational Opportunities

The commitment to open access is the cornerstone of the community college philosophy (Vaughan, 1988; McCabe & Skidmore, 1983). The nation's commitment to provide higher education for people of all races, of all ages, and from all stations in life has been demonstrated in community colleges. Ylvisaker (1985) described community colleges as higher education's closest contact with society's distant learners. Most community college mission statements call for the acceptance of all high school graduates and anyone who is eighteen years of age or older who can profit from attending the community college (Vaughan, 1985). Open access means the opportunity to enter the community college, enter a program for which they are qualified, or to take courses that will prepare them to enter programs and jobs that they are currently unprepared to enter.

A major criticism of open access community colleges is that many of the curricula result in dead end jobs and that they lower rather than raise student aspirations (Vaughan, 1985). Clark (1960) suggested that community colleges performed a "cooling-out process" in American society while Cohen (1977) considered equality of access to be "a social equalization fantasy." More recently, Brint and Karabel (1989) questioned whether students will have equal educational opportunities unbiased by socioeconomic, ethnic, and political considerations in a society where the level of aspirations for upward mobility are far greater than is possible to achieve. They

suggested that community colleges help "manage ambition" by enrolling large numbers of students in terminal vocational programs that will not lead to upward mobility.

While critics charge that community colleges tend to perpetuate class inequalities in American society, most observers agree that community colleges have done a great deal to provide access to higher education where there was none before (Templin, 1983). Astin (1982) claimed that many minority students would not attend college at all were it not for the community colleges. Templin (1983) concluded that the community college is faced with a changing societal scene which is forcing the institution to reexamine its traditional relationships with minorities and the poor and indeed to reexamine its basic mission. From Templin's perspective, "Karabel's explanation portrays the community college as an institution of limited opportunity for the poor, but the future may see a system of higher education with no opportunity for them at all" (p. 46).

Within North Carolina in 1988, the North Carolina Community College System Planning Committee articulated a goal to provide educational access to all adults with the desire to benefit from the community college system's program offerings. From their perspective, the "open door" must be open to the increasing number of adult students who are likely to be attending college on a part-time basis and juggling school with work and home responsibilities. The open door emphasis to serve all citizens will depend on the following crucial issues: maintaining low tuition and costs; increasing availability and accessibility of system offerings; providing for critical student services such as transportation, child care, and related services; providing financial assistance; offering a wide range of courses at satellite campuses; ensuring that assessment and enrollment procedures facilitate student progress; emphasizing marketing efforts which will increase participation; and providing remedial instruction, counseling, assessment, placement, and other support services which will ensure that the open door does not become a revolving door (Planning For Our Future, 1988).

Vaughan (1985) described the following actions which must be taken by community colleges to maintain open access:

1. Community college leaders must realize the importance of retaining program comprehensiveness.
2. Community college leaders need to define and understand the role of developmental education on their campuses.
3. Tuition rates must be relatively low.
4. Quality must be defined in terms of the community college's philosophy and mission.

5. Community college leaders must resist the temptation to raise admission standards as a means of improving quality.
6. Community colleges must take some chances on the students' ability to succeed and provide the necessary support services such as counseling, academic advising, and financial assistance, especially for those students who are members of lower socioeconomic groups.
7. Community college leaders must define their mission as an institution of higher education which does not have the financial, physical, or intellectual resources to be all things to all people.

At the heart of the student access to educational opportunities issue are various demographic, socioeconomic, academic, psychological, and geographical factors which impact whether or not potential students will have a chance to continue their education. Concerns about student access become even more important as the adult population becomes more diverse.

Diversity of Community College Students

As our population becomes increasingly diverse, a major concern facing community college educators is the diversity among students enrolled in community colleges. Historically, the composition of student enrollments has evolved from a fairly homogeneous student body to a more diverse and pluralistic one. Studies of community college students suggest that community colleges over time are enrolling a higher proportion of women, more part-time students with families and jobs, more academically diverse students, and more career-oriented students (Shearon, Templin, & Daniel, 1976; Shearon, Templin, Daniel, Hoffman, & West, 1980; El-Khawas et al., 1988; Palmer, 1988; Warren, 1985). Between now and the year 2000, social, technical, and economic trends suggest greater urbanization, increasing numbers and proportions of minority persons, a decline in the number of 18 to 24-year-olds, increasing rates of technological change, more senior citizens, more women in the work force, and greater economic competition internationally (Shearon & Tollefson, 1989). These trends suggest an even more diverse community college student population for the future.

Demographic trends in the North Carolina adult population are evident in the changes in the characteristics of students enrolling in North Carolina community colleges. The average age of the adult population is increasing. Due to the in-migration of retirement-aged individuals, decreasing birth rates, and the aging of the "baby boomers," the median age of North Carolina adults is steadily increasing. The median age was 26.6 in 1970, 31.7 in 1986, and is projected to reach 36.5 in 2000. The aging of the community college system's student population parallels a general

aging of the state's population and workforce. From 1982 to 1988, there was a six percent annual increase in the ages of both curriculum and continuing education students (Planning for our Future, 1988). This aging factor has contributed to the increase in the number of students attending community colleges part-time. Increasingly, more students are in the workforce and have family responsibilities which inhibit their attending college on a full-time basis. In North Carolina, the number of residents aged 18 to 24 peaked between 1980 and 1985 and will decline by 8.6 percent between 1986 and 2000. The number of North Carolina graduating high school seniors is expected to decline by up to 15 percent during the early 1990s. North Carolina adult literacy is quite low when compared to other states, and 830,000 adults lack an eighth grade education. Up to 1.8 million people in North Carolina lack literacy skills needed to function on the job. Both low literacy and low educational attainment rates are a serious threat to positioning North Carolina for healthy economic development and provide significant challenges to community colleges.

As community colleges strive to provide quality education for a more diverse student population, their administrators and faculty do not have an easy task. The national Commission on the Future of Community Colleges (1988) called attention to the challenge of serving a more diverse student population: "What works with full-time, single, well-prepared, residential students does not necessarily work with part-time students who have jobs and families--and who have often experienced less academic success in their previous schooling" (American Association of Community and Junior Colleges, 1988, p. 7). Community college faculty will be asked to educate together people of all ages--the young, middle-aged, and older adults; as well as persons from different ethnic backgrounds. Most of the students will be women and many will be economically disadvantaged. Faculty, counselors, and administrators will likely need to engage in extensive staff and organization development to prepare for the challenge faced by the emerging diversity of community college students. A key issue for North Carolina community college leaders focuses on the question--to what extent is the system of community colleges positioning itself to serve a more diverse student population?

Building a Capable Workforce

The nation's community colleges are accepting the challenge to establish partnerships with business, industry, government, labor, and education groups. Some successful linkages have been demonstrated; however, more are needed to help build a capable workforce for the decade of the 1990s and the next century.

Student Diversity and the Emerging Workforce

The nature of work is changing for the nation and for North Carolina. We are now experiencing a major economic transition from the industrial age to the information age and the era of global competition (Commission on the Future, 1989). Manufacturing will be a much smaller share of the economy in the U.S. by the year 2000 as compared to today (Johnston & Packer, 1987). Although in North Carolina, manufacturing employment is expected to remain at levels higher than the national average into the next century (Commission on the Future, 1989). Service industries, including health care, education, retailing, and government, are projected to create most of the new jobs and most of the new wealth. The shift to service occupations will bring changes in location, hours, and structure of work. The typical workplace in the future as compared to the past will likely have fewer people and more part-time workers who are either high or low earners.

Workplace requirements are changing in part because of new technology and global competition, resulting in new and more demanding standards of worker competence. Good jobs in the future will require more education and training, and advancement will require continuing mastery of new knowledge and skills. By the year 2000, the typical new job will require 13.5 years of education. The fastest growing service jobs are in the professional, technical, and sales areas and will require over 14 years of education in the year 2000 (Johnston & Packer, 1987). Continuous training and retraining for the workplace will require more investments than in the past. Overall, worker literacy and technical competence will be essential for building a capable workforce for the new century.

Along with understanding the changing nature of work and workplace requirements, community colleges will need to study and analyze the workforce composition. Five demographic facts will be influencing workers and jobs in the year 2000 (Johnston & Packer, 1987):

1. The population and the workforce will grow more slowly than at any time since the 1930s.
2. The average age of the population and the workforce will rise and the pool of younger workers entering the labor market will shrink.
3. More women will enter the workforce.
4. Minorities will be a larger share of new entrants into the labor force.
5. Immigrants will represent the largest share of the increase in the population and the workforce since the first World War. (pp. 19-20)

These trends suggest that the new workers entering the labor force by the year 2000 will be different from those in the past labor force. The workforce will grow

slowly, become older, include more women and more disadvantaged persons. Almost two thirds of the new entrants into the workforce between now and the year 2000 will be women. By the next century, Jones (1988) predicted that 47 percent of the workforce will be women, and 60 percent of working-age women will be at work. The projected increase of women in the workforce is primarily a result of increased participation by women with children who are in two-career families or are single heads of households.

The existing workforce composition and the projected demographic changes suggest that workers entering the workforce between now and the next century will be more diverse than in the past. The rapid changes in the job market are in fields requiring the highest education and skill levels. Given the diversity of the workforce and the growth in jobs requiring higher levels of education, a serious mismatch will be faced between available workers and needed skills. Can community colleges in collaboration with business and industry help build a capable workforce during the 1990s and into the next century? A second key issue for North Carolina community college leaders focuses on the question--to what extent is the system of community colleges positioning itself to prepare a capable workforce for the year 2000?

Reasons for the Study

North Carolina community colleges enter the 1990s under a new mandate from the Commission on the Future calling for "gaining the competitive edge." Explicit in this mandate are the issues of extending opportunities for access to a diverse student population and for developing a capable workforce for the information age and the era of global competition. Community colleges must function as a bridge to educational opportunities for North Carolinians and a catalyst for economic growth and development.

If student access to educational opportunity is important to community colleges, then efforts are needed to study students who are being served and potential students who are not being served. Comparisons are needed to determine if students enrolling represent a cross-section of the adult population. Community colleges need to know why students enroll, their educational goals, and how well the colleges serve them. Regarding potential students not enrolling, there is a need to know why they do not enroll and the barriers preventing their attendance.

Student Diversity and the Emerging Workforce

Efforts need to be made to determine in what ways student diversity is affecting the colleges. As increasing student diversity is expected, colleges need to look at the impact on programs, staffing, and services.

Since community colleges attempt to be responsive to the students they serve, it is important for the colleges to know the characteristics of their students to provide information for planning. They need to know where the gaps are in serving the adult population so that clear goals can be established. Additionally, community colleges need to know in what ways their students have been changing so that programs, policies, staffing patterns, and services can be examined in light of this information. Changes in student profiles can be determined by examining North Carolina Department of Community Colleges' annual reports from 1963 to 1988, and by comparing currently enrolled students with the student profiles of previous studies (Bolick, 1969; Phillips, 1970; Shearon, Templin, & Daniel, 1976; and Shearon, Templin, Daniel, Hoffman, & West, 1980). Through a comprehensive study of students being served, changes in student profiles over time, and comparisons between students being served and potential students, community college leaders will be in a better position to assess the extent to which the system is positioning itself to serve diverse students and to prepare people as a capable workforce. A study of currently enrolled students and of the changes in students characteristics over the past 25 years was an important and timely part of the silver anniversary celebration for the North Carolina Community College System.

Objectives

To provide information on students for purposes of planning and positioning community colleges to extend more educational opportunities to a diverse adult student population and to build a capable workforce, the following objectives and research questions were developed to guide the study.

The four objectives of this study were to:

1. Update prior studies of curriculum and continuing education students enrolled in the North Carolina Community College System for the purpose of detecting changes in student profiles during the past 25 years from 1963 to 1988.
2. Develop in-depth student profiles on currently enrolled students in terms of demographic, socioeconomic, academic, attendance, and institutional characteristics, and reasons for enrolling.

3. Provide demographic and socioeconomic profiles of North Carolina's adult population (18 years of age and older) and to examine the extent to which the 1988 student population was representative of the North Carolina adult population.
4. Analyze and summarize relationships between educational program areas in which students enrolled and selected demographic, socioeconomic, academic, attendance, and institutional characteristics, and reasons for enrolling.

Research Questions

The following 15 research questions were formulated to serve as a guide for the above four objectives:

1. What changes have occurred in the profiles of students during the past twenty-five years?
2. Who are the curriculum and continuing education students being served by the North Carolina Community College System in terms of their demographic, socioeconomic, academic, attendance, and institutional characteristics?
3. Which students are enrolling in what educational program areas--college transfer, general, technical, vocational, academic extension, preparatory, avocational, occupational, and practical skills?
4. What is the proportion of students enrolled in the North Carolina Community College System compared to the proportion of the State's population who are eligible to enroll, in terms of selected demographic and socioeconomic characteristics?
5. What groups are not being served by community colleges in terms of selected demographic and socioeconomic characteristics?
6. Which students in what educational program areas would least likely continue their education were it not for the existence of community colleges?
7. Which students in what educational program areas are least likely to attend a community college as the commuting distance to and from class increases?
8. Which students in what educational program areas are selecting community colleges as their first choice over other forms of postsecondary education?

9. What forms of recruitment strategies attract students in different educational program areas to community colleges?
10. Which curriculum students in what educational program areas are receiving financial assistance and what is the source of that aid?
11. Which students in what educational program areas are employed and to what extent?
12. Which students in what educational program areas already have a baccalaureate degree and which students plan to work toward a four-year degree?
13. Which students in what educational program areas plan to work in North Carolina following completion of their course of study?
14. What are the major reasons for students continuing their education by educational program areas?
15. What institutional characteristics do students consider to be the most influential in their decisions to attend community colleges in terms of educational program areas?

Definition of Terms

The following terms which are used in this report are defined in this section for clarity in presentation of the findings.

Academic characteristics: the academic characteristics examined in this study were: (1) General Education Development (GED) score, (2) high school grade average, (3) grade average at this college, (4) prior four-year college/university enrollment, and (5) prior school setting.

Academic extension: a single, non-credit course designed to serve the educational needs of adults seeking intellectual growth. Subjects in the humanities, math, science, and social sciences are included.

Attendance characteristics: Student attendance characteristics observed were categorized into the following sections: (1) general attendance and enrollment characteristics, (2) goals and intentions, (3) sources of influence and information, (4) barriers, and (5) subsistence and expenses. General attendance and enrollment characteristics observed were program in which enrolled, time of attendance, preferred time of attendance, location of classes, courses this quarter, credit hours this quarter, clock hours per week, total quarter hours, total quarters enrolled, distance to class, trips to school, and choice of institution. Goals and intentions were observed by primary

educational goal, primary graduation intention, and highest level of education intended. Sources of influence and information were observed by responses to source of influence to attend and source of information about program or course. Barriers were described by the major reasons that students feel prevent others from attending their particular institution. Subsistence and expenses were observed by the following variables: sources of income, sources of financial aid, amount of financial aid, book and supply expenses, child care expenses, number of dependents, and employment plans.

Avocational extension: a single non-credit course focusing on an individual's personal or leisure interests.

College transfer: Credit courses taught in some North Carolina community colleges which usually parallel those required during the freshman and sophomore years at many colleges and universities. These courses lead to two-year associate degrees in arts, fine arts or sciences and can be transferred to a four-year college/university. Programs consist of required English, humanities, mathematics, science, and social science courses. Each degree program has additional requirements for course work in the arts, fine arts, or sciences.

Comfort level: an indication of the state of ease or well-being ranging from very comfortable to very uncomfortable. Categories consist of: (1) race relations, (2) presence of similar people, (3) black presence, (4) talking with counselors, (5) talking with instructors, (6) age of students in classes, (7) sex of students in classes, (8) academic ability of students in classes, (9) occupational status of students in classes, and (10) social status of students in classes.

Community college: a two-year, public, post-secondary educational institution, operating under the provisions of Chapter 115-D* of the North Carolina General Statutes, which may offer (1) freshman and sophomore courses of a college of arts and sciences, (2) courses in general adult education, (3) organized credit courses for training technicians, and (4) technical, vocational, and trade specialty courses. *On July 6, 1987, this amendment to the North Carolina General Statutes, Chapter 115-D, became effective: "The term 'community college' is defined as an educational institution operating under the provisions of the General Statutes of North Carolina, Chapter 115-D, and dedicated to the educational needs of the service area which it serves. . . . Local boards of trustees, with concurrence of the respective county commissioners, may, before January 1, 1988, adopt names for their respective institutions that include the words 'community college.'" Because this amendment was effectuated by a vast majority of the 58 institutions either before, during, of immediately after the study survey, in this presentation all institutions are referred to as community colleges.

Continuing education program area: refers to all non-credit educational activities which do not lead to a traditional degree, diploma, or certificate. Among these activities are specific job training and retraining, literacy education, and improved use of leisure time. The continuing education program area consists of the following educational programs: academic education, avocational, occupational, practical skills, preparatory, and recreational.

Curriculum program area: refers to all educational activities for which course credit is given. These credit activities lead to certificates, diplomas, or associates degrees and include college transfer, general, technical, and vocational education programs.

Demographic characteristics: the selected demographic characteristics identified were: (1) sex, (2) race or ethnicity, (3) age, (4) marital status, (5) veteran status, (6) residence while enrolled, and (7) change of residence to attend.

Diversity of students: This concept refers to the wide range of characteristics of students enrolling in community colleges and potential students to include younger and older; economically disadvantaged and wealthy; full-time and part-time students; single, married, separated, divorced, and widowed; academically well-prepared and poorly-prepared; full-time employees and full-time students; non-readers and adults with graduate degrees; ethnic diversity--white, black, Hispanics, Native Americans, Asian; women and men; unemployed and employed; native-born and immigrants; rural and urban; high and low achievers. The currently enrolled students and potential students also are different with regard to values and attitudes, learning styles, work habits, study skills, family support, and peer group support.

General education: credit educational activities designed for individuals wishing to broaden their education with emphasis on personal interest, growth, and development. This two-year program provides students opportunities to study English, literature, fine arts, philosophy, social science, science, and mathematics. This program is not principally designed for college transfer. Many institutions conduct this program through contractual agreement with a four-year college/university.

Institutional characteristics: those characteristics which are thought to influence attendance: (1) educational programs or courses available, (2) financial assistance available, (3) job placement services, (4) location, (5) low cost, (6) open-door policy, (7) quality of instruction, (8) student centered institution, (9) college's reputation, (10) academically unable to attend elsewhere, (11) convenient class schedule, (12) child care available, and (13) other reasons.

North Carolina Community College System: the system of 58 public, two-year postsecondary education institutions administered by the North Carolina Department of Community Colleges and the State Board of Community Colleges as defined in Chapter 115-D of the North Carolina General Statutes. Member institutions offer college-level programs that lead to an Associate degree, diploma, or certificate, and non-credit continuing education programs that lead to a certificate. The institutions are nonresident, multipurpose, and community-centered.

Occupational extension: a single, non-credit course which is occupationally oriented. These educational activities are designed for upgrading job skills or training for a new occupation and are offered to people in all technical and vocational occupations.

Practical skills: a single, non-credit course designed to provide practical training for persons pursuing skills that are not considered their primary vocation, but may supplement income or reasonably lead to employment.

Preparatory education: a non-credit course of study designed to enhance the education of those adults functioning at or below the eighth grade level, to prepare individuals for taking the GED exam, or to develop the competencies necessary for the Adult High School Diploma. Educational activities included are Adult Basic Education (ABE), Adult High School Diploma (AHSD), and General Educational Development (GED).

Primary income: a construct utilized in the 1979 profile study.. It was examined in the belief that the socioeconomic status of a student whose parents provided more than 50 percent of his/her support is better reflected by the parents' income than the student's income. In the 1988 profile study, primary income was based on the reported 1987 income of the head of household. If the respondent indicated self or spouse as head of household, the student's income was considered primary. If the respondent indicated father or mother as head of household, the parents' income was considered primary.

Rank order: an ordinal ranking procedure that used the raw scores as the criteria on which ranks are based. The raw score is the frequency of responses multiplied by the rank value. Rank values are as follow: a first choice equals 5; a second choice equals 4; a third choice equals 3; a fourth choice equals 2; and a fifth choice equals 1. Rank ordering assigns numbers to objects or variables and arranges them in numerical order.

Recreational extension: non-credit, self-supporting courses which an institution may provide at the request of the community, but for which the institution receives no state funds. Athletic, game, and hobby courses fall into this category. Because of the small number of respondents in the recreational extension program area (five respondents), the

recreational extension program area was added to the avocational extension program area.

Representation index: defines the overall representativeness of students on North Carolina community college campuses when the changes in the North Carolina adult population are taken into account. The representation index equals the percentage difference of student enrollments in regards to a selected variable minus the percentage difference of the North Carolina adult population. A positive number indicates an increase in proportional enrollments which takes population changes into account. A negative number indicates a decrease in proportional enrollments which takes population changes into account.

Socioeconomic characteristics: characteristics described in this study by: (1) student's education, (2) father's education, (3) mother's education, (4) head of household, (5) student's income, (6) parents' income, (7) primary income, (8) occupation of head of household, (9) employment status, and (10) hours worked per week.

Technical education: all credit educational activities which prepare students for entry-level jobs in paraprofessional fields as technicians. The two-year programs lead to an associate in applied science degree. Students take courses in English and social science in addition to courses of an occupational nature.

Vocational education: all credit educational activities which provide training that will enable graduates to enter a skilled occupation at the entry level and to progress rapidly to the skilled or craftsman level. These programs require a minimum of 64 quarter hours of credit and include courses in communication skills and social science. Graduates of programs less than a year are awarded certificates.

Chapter 2
Study Design

The methodological procedures used in this study are described through the presentation of the following topics: (a) research design, (b) description of the population, (c) participation of college coordinators, (d) college coordinator workshops and manuals, (e) sample design, (f) allocated sample size, (g) construction of the sampling frame, (h) sample selection method, (i) actual sample size, (j) research instrument, (k) data collection, (l) analysis of data, and (m) limitations of the survey.

Research Design

A research design refers to a plan, blueprint, or guide for data collection, analysis, and interpretation. Research design decisions depend on the purposes of the study, the nature of the problem, and the alternatives appropriate for its investigation (Isaac & Michael, 1981).

A cross-sectional descriptive research design was utilized in this profile study of student characteristics. The time dimension in this design was cross-sectional, so named because researchers generally study a cross-section of the population of interest at one time only (Forcese & Richer, 1973). A descriptive design uses words and numbers through methods of analysis, interpretation, classification, and integration of findings to describe what is in existence within the target population (Adams & Schvaneveldt, 1985). The purpose of descriptive research is to describe systematically and accurately the facts and characteristics of a given population or area of interest.

There is not agreement on what constitutes "descriptive research" and "survey" is used as an equivalent term (Babbie, 1983). Kerlinger (1964) described survey research as that branch of social scientific investigation that studies large and small populations by selecting and studying samples chosen from the populations to discover the relative incidence, distribution, and interrelations of sociological and psychological variables. The advantages of survey research are twofold: (a) probability samples permit clear statistical inferences to defined populations, and (b) measurement can often be made in the natural settings of actual populations (Kish, 1965). Survey research designs are practical for identifying trends, current conditions, and potential needs, as well as providing information on which administrative decisions can be based (Mouly, 1970).

Description of the Population

A population is the aggregate of all the cases that conform to some designated set of specifications (Selltiz, Jahoda, Deutsch, & Cook, 1964). In this profile study, the survey population consisted of all students enrolled in the 58 colleges of the North Carolina Community College System during the seventh week of the fall quarter of 1988. A projected total enrollment for the community college system during the fall semester was 273,414. Appendix A presents the procedure used to calculate this figure from the last three fall enrollment figures provided by the Department of Community Colleges. The actual unduplicated headcount enrollment for the fall quarter, 1988, was 127,277 curriculum students and 166,640 continuing education students.

A stratum may be defined by one or more specifications that divide a population into mutually exclusive segments (Selltiz et al., 1964). The chosen research design specifies that the survey population be allocated to one of two strata: the curriculum program area or the continuing education program area.

Participation of College Coordinators

The president of each of the 58 colleges chose to participate in the study, and designated a college coordinator to direct that college's involvement. The coordinator's responsibilities included: (a) involving the college, (b) drawing the sample, (c) informing instructors, (d) administering the survey process, and (e) returning the questionnaires to the research project staff. A list of the college coordinators who participated in this study is provided in Appendix B.

College Coordinator Workshops and Manuals

In a large-scale survey a certain degree of standardization is absolutely necessary (Blalock, 1970). In an effort to regulate the administration of the questionnaires in the various colleges and to standardize the methods of data collection, the following two actions were taken: (a) the training of the college coordinators, and (b) the provision of a manual which contained detailed instructions of the tasks needed to be accomplished by each coordinator.

Seven regional workshops were held for the coordinators with the following objectives: (a) to provide training on the research and sampling designs, (b) to discuss the purpose of the study and its potential uses, (c) to gain experience in drawing a

college sample, and (d) to establish consistency of procedures throughout the participating colleges. Each coordinator was given a manual which provided thorough instructions for conducting this study at their college. Interaction between coordinators and the research project staff began during the workshops and was continued through telephone conversations. The workshop locations and dates are displayed in Appendix C.

Sample Design

The sample design encompasses two processes: (a) a selection process, the rules and operations by which some members of the population are included in the sample; and (b) an estimation process, for computing the sample statistics, which are sample estimates of population values (Kish, 1965). A sample can never reproduce exactly the various characteristics of the population unless the population itself is taken as the sample and a census is carried out (Sukhatme, Sukhatme, Sukhatme, & Asok, 1984). The size of this survey population required the use of a sample rather than a census of community college students. In collaboration with Dr. Charles H. Proctor, Professor of Statistics, North Carolina State University, a stratified systematic cluster sample design was chosen for this study.

The sample was stratified to represent two identifiable subpopulations, or strata, within the total student population: (a) students enrolled in the curriculum program area, and (b) students enrolled in the continuing education program area. Stratified sampling is used primarily to ensure that different groups of a population are adequately represented in the sample, so that the level of accuracy in estimating parameters is increased (Nachmias & Nachmias, 1981).

Systematic sampling consists of selecting every kth sampling unit of the population after the first sampling unit is selected at random (Nachmias & Nachmias, 1981). This procedure ensures that each unit has the same chance of being included in the sample. A systematic sample is spread out more evenly over the population, so that it is likely to produce a sample that is more representative and more efficient than a simple random sample (Som, 1973). An advantage of systematic sampling is that it is operationally convenient. As the coordinators in each college drew the sample, it was necessary to have a procedure which would be standard for each college.

A cluster sampling technique was used because it was impractical to compile an accurate and exhaustive list of all the elements comprising the survey population, that is a listing of all students enrolled. In cluster sampling, one arrives at the ultimate set

of elements to be included in the sample by first sampling in terms of larger groupings or "clusters" (Selltiz et al., 1964). Within each college, individual classes were identified as separate sampling units, or clusters of individual students.

Appendix D presents the instructions provided to coordinators on how to draw the sample.

Allocated Sample Size

Factors which influenced decisions about the allocated size of the sample were: (a) a desire to provide each participating college with a reliable profile of its student body while developing statewide information, (b) the need to draw the sample at a comparable point in time at each college, and (c) the need for minimal disruption of normal academic activities (Shearon, Templin, Daniel, Hoffman, & West, 1980). In conjunction with Dr. Charles Proctor, a formula for allocated sample size was selected that allowed the desired degree of precision, accounted for the effects of sampling clusters, and adjusted for variations in the sizes of the colleges. The allocated sample size formula was 285 + square root of (N-500). In this formula, N equals the projected enrollment of curriculum and continuing education students during the fall quarter, 1988. Appendix A presents the enrollment projections and the allocated sample sizes for each of the 58 colleges. It was determined that all colleges should receive data that is, at a minimum, accurate to within plus or minus 3.5 percent of an estimated population value. This accuracy should have a 0.68 probability of being true.

When the data from all of the participating colleges are combined to obtain a systemwide profile of the North Carolina Community College System, the results are extremely accurate and precise with an expected error of less than one percent, 95 percent of the time. The desired systemwide sample size was 20,003 students.

Construction of the Sampling Frame

A sampling frame is the actual list of sampling units from which the sample is selected (Babbie, 1983). For this study, the sampling frame consisted of all classes being offered during the seventh week of the fall quarter, 1988, at each college. As the sample design included the stratification of the survey population into two major program areas, the sampling frame was created by listing all curriculum program courses first, followed by a listing of all continuing education program courses.

Sample Selection Method

The method for sample selection was uniform for all 58 colleges. The three main tasks of the college coordinators in accomplishing this sampling method were: (a) to prepare the total class list, (b) to figure the number of class in the college's sample, and (c) to choose the classes which will comprise the college's sample. Appendix D presents a thorough explanation of these three tasks. Having selected the classes for the sample, the coordinator was responsible for securing completed questionnaires from individuals in those selected classes.

Actual Sample Size

The 58 colleges participating in this study were provided with desired or allocated sample sizes. These figures were utilized in a formula (from the sample selection phase) that provided the number of classes to be selected in each college's sample.

The actual sample size is the number of students enrolled in the sampled classes at the time of the administration of the questionnaire. The actual sample excludes classes that had ended or been canceled and students who had dropped from class prior to the administration of the questionnaire. The total actual sample size was 20,047. Of that number, 16,196 usable questionnaires were returned.

The response rates within each college were based upon the actual sample size and ranged from 59 percent to 91 percent, with a mean response rate of 81 percent. The procedures used in calculating response rates and the response rate for each college are presented in Appendix E.

Research Instrument

The research instrument used for this study was a 50-item closed-form or structured questionnaire. A questionnaire is a data-gathering device that elicits from a respondent the answers or reactions to printed (prearranged) questions presented in a specific order (Adams & Schvaneveldt, 1985). The 1988 questionnaire was essentially a replication and expansion of the research instruments used in two previous studies on North Carolina community college students: Shearon, Templin, and Daniel (1976), and Shearon, Templin, Daniel, Hoffman, and West (1980). A copy of the 1988 questionnaire is provided in Appendix F. The research instrument was designed to be scored by optical scanning equipment.

The pretest is a try-out of the questionnaire to see how it works and whether changes are necessary before the start of the full-scale study (Selltiz et al., 1964). The questionnaire was pretested at five colleges with 159 students. Pretesting was conducted to meet the following objectives: (a) to check the responses provided for questions not previously on the questionnaire, (b) to record the time needed to complete the questionnaire, (c) to verify the readability of the questions and responses, (d) to examine the instructions and introductory comments, (e) to detect ambiguous or redundant items, and (f) to field test the format of questions. An informative portion of the pretest endeavor was a discussion with the pretest respondents after they had completed the questionnaire. A more detailed discussion of the pretest results is presented in Appendix G.

Data Collection

The data were collected by the direct contact method of questionnaire presentation. A self-administered questionnaire was given to all students enrolled in the classes that had been selected into each college's sample. The college coordinators drew the classes to be included in the sample, and then informed the instructors of those classes of their inclusion. The coordinators then distributed the questionnaires to the instructors along with instructions for administering the questionnaire. If a student was absent from class during the questionnaire administration, attempts were made by the instructor to secure a questionnaire at the next class time. The instructor returned completed questionnaires to the coordinator. The coordinator compiled all the completed questionnaires, completed a summary form, and delivered the questionnaires to the research team.

Analysis of the Data

The editing process occurred at two stages: (a) as questionnaires were prepared for scanning, and (b) during the scanning phase with the detection and correction of errors. As completed questionnaires were received at North Carolina State University, the research project staff checked each one for stray marks, for responses that could not be read by the optical scanning equipment, and for disparity between recorded bubbles. The edited instruments were machine scanned at Measurement, Inc. in Durham, North Carolina, and the data transferred to magnetic tape. This scanning process produced reports which were used to detect and correct errors.

Data analysis proper, after editing, coding and cleaning of data, consists of tabulation of the results, statistical investigation of them and of the survey process, and

writing a report (Jolliffe, 1986). The data were analyzed using the SAS System, a software system developed by SAS Institute, Cary, North Carolina.

In the data analysis phase, expansion factors were used to adjust sample data so that it would estimate a percent of the statewide population of community college students stratified by the curriculum and continuing education program areas. The expansion formula was provided by Dr. Charles Proctor, statistical consultant for this research project. Appendix H presents the expansion formula which was used in the data analysis phase.

Tables were constructed to show estimated percentage distributions of all variables in the study as related to the broad educational program areas of curriculum and continuing education and to the general programs within each of these program areas. Curriculum programs were: (a) college transfer, (b) general education, (c) technical education, and (d) vocational education. Continuing education programs were: (a) academic education extension, (b) preparatory education which included adult high school diploma, general educational development (GED), and adult basic education (ABE), (c) avocational extension, (d) practical skills extension, and (e) occupational extension. Because of the small number of respondents in the recreational extension program area (five respondents), the recreational extension program area was added to the avocational extension program area.

Limitations of the Study

A limitation of this study is that the sample was collected at one point in time during the fall quarter, 1988. Curriculum classes normally are a full quarter in length, while continuing education classes vary in length and are offered at different times in the quarter. Consequently, all of the continuing education classes offered during the fall quarter, 1988, could not be included in the sampling frame. There was no way to determine how representative of the continuing education program area were the continuing education program students enrolled during the seventh week of the quarter and selected into the sample.

The lack of control over the choosing of the sample, and the administration of the questionnaire in the college settings are limitations of this survey. The research team was not able to assure standard procedures were followed by the college coordinator or the individual who administered the questionnaire.

Surveys are obtrusive, unnatural intrusions into the individual's everyday life. People are fully aware of being the subjects of study and often respond differently from how they might if they were unaware of the researcher's interest in them. This research design relied on the cooperation of the individuals sampled and depended on their willingness and ability to provide the requested information in a reliable and valid fashion.

Data in previous studies were collected from students enrolled in the spring quarter, while the current study collected data in the seventh week of the fall quarter. There may be a problem when comparing the findings of the 1988 study with the previous studies, due to the two collection times. There may be differences in the profile of students who enroll in the fall term and those who persist to the spring term. The researchers have no data to support this possible limitation but the possibility does exist.

PART II.
THE CHANGING COMMUNITY COLLEGE STUDENT PROFILES

A major objective of this study was to update prior studies of curriculum and continuing education students enrolled in the North Carolina Community College System for the purpose of highlighting changes in student profiles during the first 25 years of the system in North Carolina. Along with detecting changes in student profiles, this study investigated the extent to which community college students have been representative of the adult population of North Carolina.

Part II is organized into the following three chapters: Chapter 3--Profile Changes in the Curriculum Student Population; Chapter 4--Profile Changes in the Continuing Education Student Population; Chapter 5--Student Enrollment Changes and Comparisons with the North Carolina Adult Population. The research findings are presented in these chapters followed by highlights at the end of the chapters.

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Chapter 3
Profile Changes in the Curriculum Student Population

The profile changes in the curriculum student population between the 1968, 1974, 1979, and 1988 studies are described in terms of selected demographic, socioeconomic, and attendance characteristics. Comparisons are made on data collected during the four studies and not during the intervening years. Highlights of curriculum student profile changes are presented at the end of this chapter.

Demographic Characteristics

The selected demographic characteristics used in describing the curriculum student profile changes were: sex, race, age, marital status, location of institution, and residence while enrolled. The data are presented in Table 1.

Sex

Since 1968, the proportions of women enrolled in curriculum programs have increased from 32 to 62 percent, while the proportions of male enrollments have shown a steady decline from 68 to 38 percent. In the last twenty years, the male to female ratio has almost completely reversed.

Race

There were increases in the proportions of black curriculum student enrollments between 1968 and 1979. However, between 1979 and 1988, the percentage of black enrollment has decreased from 21 percent to 17 percent. Since the last study, the "other" enrollment category has increased, and the percentages of American Indian enrollments have been steady.

Age

North Carolina community colleges are serving an increasingly diverse curriculum student population with regards to age. In 1968, 74 percent of the curriculum student enrollment was 22 years of age or younger, compared to 39 percent in 1979 and 1988. The percentages of students who were 18 years and younger increased between 1979 and 1988. When comparing the 1968 and 1988 percentages, there have been increasing proportions in all age categories 23 years of age and older, with the largest percent increase in the 30-39 age category. It may be of interest to note that between 1979 and 1988, the percentages declined for curriculum students between the ages of 19 and 29 while there were percentage increases observed for students in the 17 and 18 year age category and the 30 to 50 and older age categories.

Table 1 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, 1968, 1974, 1979, 1988, by sex, race, age, marital status, location of institution, and residence while enrolled

Variable	Curriculum students 1968	1974	1979	1988
Sex:				
Female	32.2	39.2	53.6	62.0
Male	67.8	60.8	46.4	38.0
Total	100.0	100.0	100.0	100.0
Race:				
American Indian	0.8	0.7	1.4	1.3
Black	12.3	16.2	20.9	16.5
White	86.8	82.2	76.5	79.7
Other	0.0	0.8	1.2	2.5
Total	99.9	99.9	100.0	100.0
Age:				
17 or younger	0.8	0.3	0.4	2.8
18	19.7	7.6	6.1	10.7
19	28.4	14.6	11.9	9.8
20-22	24.8	21.7	20.7	15.7
23-25	7.5	13.3	13.6	10.8
26-29	5.7	13.8	14.4	11.4
30-39	8.3	17.0	19.9	21.5
40-49	3.8	9.2	8.3	11.3
50 or older	0.9	2.5	4.8	6.0
Total	99.9	100.0	100.1	100.0
Marital status:				
Single	68.7	43.8	45.0	48.2
Married	28.1	51.0	45.1	40.4
Separated	1.0	2.1	3.5	3.3
Widowed	0.8	0.8	1.5	1.3
Divorced	1.4	2.2	4.9	6.8
Total	100.0	99.9	100.0	100.0
Location of institution:				
In home county	62.2	66.4	69.8	82.7
Not in home county	37.8	33.6	30.2	17.3
Total	100.0	100.0	100.0	100.0
Residence while enrolled:				
With parents	57.2	34.2	31.3	34.4
With spouse	24.6	49.8	43.6	39.0
Boarding	10.6	1.3	0.8	0.7
Other	7.5	14.7	24.3	25.9
Total	99.9	100.0	100.0	100.0

Marital Status

In 1968, almost seven out of ten curriculum students were single, compared to almost five out of ten in 1988. It is of interest to note that the percentage of single curriculum students has increased slightly since 1974, from 44 to 48 percent. Over the 20 year period, the percentages of divorced curriculum students have steadily increased. Since 1974 there has been a decrease in married curriculum students from 51 to 40 percent.

Location of Institution

Since 1968, the percentages of curriculum students enrolled in an institution that was located in their home county have steadily increased. In 1988, more than four fifths of all curriculum students were attending an institution located in their home county.

Residence While Enrolled

Observations of curriculum student residence patterns revealed some dramatic changes between 1968 and 1974. The proportion of students living with parents declined from 57 percent in 1968 to 34 percent in 1974, while the proportion of students living with a spouse increased. There has been a large increase in the proportion of curriculum students living in "other" types of residential arrangements over the 20 year span. The proportion of curriculum students living with parents increased slightly between 1979 and 1988.

Socioeconomic Characteristics

Selected socioeconomic characteristics used in describing curriculum student profile changes were: student's education, father's education, mother's education, and student's employment status. These data are found in Table 2.

Student's Education

Over the last twenty years, there has been a decrease in the percentage of students with only a high school education (64 to 36 percent). Correspondingly, the percentage of curriculum students with some postsecondary education has increased from 24 to 54 percent. There has been an decrease in the proportion of curriculum students who have less than a high school education over the time period of these studies.

Parents' Education

The educational level of curriculum students' parents has increased considerably over the past 20 years. Between 1968 and 1988, the proportion of fathers who had some postsecondary education increased from 11 to 33 percent, whereas the percentage of mothers with some postsecondary education increased from 12 to 32 percent.

Table 2 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, 1968, 1974, 1979, 1988, by student's education, father's education, mother's education, and student's employment status

Variable	Curriculum students 1968	1974	1979	1988
Student's education:				
8th grade or less	1.6	1.3	0.8	0.5
Some high school	4.9	4.1	2.8	3.3
High school graduate	64.0	45.4	40.0	36.3
GED	5.2	7.7	7.8	6.1
Some college/college graduate	24.0	39.6	46.4	51.5
Graduate work	0.3	1.9	2.2	2.3
Total	100.0	100.0	100.0	100.0
Father's education:				
8th grade or less	37.3	38.3	30.8	19.7
Some high school	26.6	19.2	18.3	14.6
High school graduate	24.9	25.0	28.5	33.0
Some college/ college graduate	8.8	15.0	19.2	28.1
Graduate work	2.5	2.6	3.4	4.6
Total	100.1	100.1	100.2	100.0
Mother's education:				
8th grade or less	24.1	24.5	19.8	12.5
Some high school	31.9	22.4	22.0	14.8
High school graduate	31.7	35.0	39.8	40.3
Some college/ college graduate	10.6	16.2	18.2	29.3
Graduate work	1.8	1.8	2.1	3.1
Total	100.1	99.9	101.9	100.0
Student's employment status:				
Full-time	21.4	45.5	43.1	48.2
Part-time	32.6	25.4	21.8	26.6
Unemployed, other	46.0	29.2	35.1	25.2
Total	100.0	100.1	100.0	100.0

Curriculum students reported that fewer parents had less than a high school education in 1988 than in 1968. Overall, mothers tended to have higher levels of education than fathers.

Student's Employment Status

In 1968, 21 percent of curriculum students were employed full-time, compared to 48 percent in 1988. The proportion of students employed part-time declined steadily through 1979 but increased in the 1988 study. The proportion of unemployed or "other" students decreased to 25 percent from a peak of 46 percent in 1968. Overall, there are more working curriculum students in 1988 than in 1968, with the largest proportion working full-time. It is important to note that the majority of curriculum students reported that they were employed either full or part-time over the past two decades.

Attendance Characteristics

Selected attendance characteristics were used to determine profile changes in curriculum students between the years 1968 and 1988. The attendance characteristics were: (a) program in which enrolled, (b) time of attendance, (c) hours in class per week, (d) distance to class, (e) attendance had this institution not existed, (f) plans to work toward a four-year degree, and (g) employment plans upon completion of program. Data on these characteristics are described in Table 3.

Program in Which Enrolled

Several trends emerged when the curriculum student enrollments were examined by programs over the past 20 years. The percentages of curriculum students enrolling in technical programs have increased, while there has been a decrease in the percentages of vocational student enrollments from 1968 to 1988. The largest proportion of college transfer students (24 percent) was enrolled in 1968. There was a steady decline in the percentages of curriculum students enrolled in college transfer through 1979, but the proportion has increased to 19 percent in 1988.

Time of Attendance

The proportion of curriculum students attending during the day has steadily decreased from 84 percent in 1968 to 57 percent in 1988. The proportion of curriculum students attending during the evening has increased, from 16 percent in 1968 to 43 percent in 1988. The majority of all curriculum students continue to enroll in day classes.

Table 3 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, 1968, 1974, 1979, 1988, by program in which enrolled, time of attendance, hours in class per week, distance to class, would have attended another institution had this one not existed, plans to obtain four year degree, and employment plans upon completion of program

Variable	Curriculum students 1968	1974	1979	1988
Program in which enrolled:				
College transfer	23.7	15.2	11.2	18.9
General education	0.0	7.5	2.8	7.4
Special credit	0.0	10.4	14.4	0.0
Technical education	47.3	47.0	52.3	57.6
Vocational education	29.0	19.9	19.3	16.1
Total	100.0	100.0	100.0	100.0
Time of attendance:				
Day	83.7	65.4	60.2	56.7
Evening	16.3	34.5	39.8	43.3
Total	100.0	99.9	100.0	100.0
Hours in class per week:				
15 or less	27.0	52.0	61.4	71.6
16 - 20	26.0	17.2	14.6	12.1
21 - 25	17.2	10.4	8.7	7.0
26 or more	29.8	20.4	15.3	9.3
Total	100.0	100.0	100.0	100.0
Distance to class one way:				
0 - 15 miles	72.4	75.2	73.5	73.1
16 - 25	13.9	16.3	17.4	16.5
26 - 30	5.7	3.7	3.8	4.8
31 or more	8.0	4.7	5.4	5.6
Total	100.0	99.9	100.1	100.0
Would have attended another institution had this one not existed:				
Yes	69.6	59.3	61.4	66.4
No	30.4	40.7	38.6	33.6
Total	100.0	100.0	100.0	100.0

Table 3 (continued)

Variable	Curriculum Students 1968	1974	1979	1988
Plan to work toward a four-year degree:				
Yes	39.6	54.9	45.9	47.9
No	60.4	45.1	54.1	52.1
Total	100.0	100.0	100.0	100.0
Employment plans:				
Work in North Carolina	81.8	87.9	78.0	77.3
Work in another state	7.5	9.3	9.3	10.3
Military	4.5	0.4	1.0	1.7
Keeping house	3.6	0.7	1.8	0.7
Retirement	N/A	N/A	N/A	1.7
Other	2.6	1.7	9.9	8.3
Total	100.0	100.0	100.0	100.0

Hours in Class Per Week

Curriculum students have overwhelmingly reduced their hours in class per week over the past 20 years. In 1968, 27 percent of the curriculum students were in class 15 hours or less, compared to 72 percent in 1988. Conversely, in 1968, 73 percent of curriculum students were in class more than 15 hours, compared to 28 percent in 1988.

Distance to Class

Over the past 20 years, there has been very little change in the distance curriculum students travel one-way to class. The majority of curriculum students (73 percent) continue to live or work within a 15 mile radius of the location of their classes.

Would Have Attended Another Institution

In 1968, 70 percent of the curriculum students indicated they would have attended another institution if theirs had not existed. This proportion decreased to 59 percent in 1974 and has steadily increased to 66 percent in 1988. The 1988 data indicated that one of every three curriculum students would have received no postsecondary education had it not been for the North Carolina community college system. It is important to note that two thirds of all curriculum students reported that they would have attended another college had the one they were attending not been in existence.

Plan to Work Toward a Four-Year Degree

In 1968, 40 percent of the curriculum students planned to work toward a four-year college degree compared to 48 percent in 1988. In 1988 the percent of curriculum

students who planned to work toward a four-year college degree was less than the 1974 peak of 55 percent. Overall, the majority of curriculum students continue to report no plans for working towards a baccalaureate degree.

Employment Plans
The majority of curriculum students since 1968 planned to work in North Carolina upon completion of their program, although there have been slight percentage decreases since the 1974 study. The proportions of curriculum students who planned to work in another state have increased over the same period.

Highlights of Curriculum Student Profile Changes

Sex: Women students comprised a majority of curriculum students in the North Carolina Community College System. Their percentages have increased from 32 percent in 1968 to 62 percent in 1988.

Race: Overall, the proportion of black curriculum students has increased since 1968, however, the percentage decreased from 21 percent in 1979 to 17 percent in 1988.

Age: Curriculum students in general are becoming older, however, there was a resurgence in the 17 and 18-year-old students in 1988. The percentage of students in the 19 to 29 age categories has decreased while the percentage in the 30 to 50 and older categories has increased.

Marital Status: Since 1974 the percentage of single curriculum students has increased from 44 to 48 percent, while married students have decreased from 51 to 40 percent.

Student's Education: The percentage of curriculum students with postsecondary education experience has increased from 24 percent in 1968 to 54 percent in 1988.

Employment Status: The trend has been for increasingly higher percentages of curriculum students to be employed while enrolled in classes. In 1968, 54 percent of the students were employed as compared to 75 percent in 1988.

Curriculum Programs: The percentage of curriculum students in technical programs has increased from 47 percent in 1968 to 58 percent in 1988, while the proportions of vocational students have decreased from 29 to 16 percent. The college transfer proportion increased from 11 percent in 1979 to 19 percent in 1988.

Chapter 4
Profile Changes in the Continuing Education Student Population

The profile changes in the continuing education student population between the 1969, 1974, 1979, and 1988 studies are described according to selected demographic, socioeconomic, and attendance characteristics. Comparisons are made on data collected during the four studies and not on the intervening years. Highlights of continuing education student profile changes are described at the end of the chapter.

Demographic Characteristics

The demographic characteristics used in describing profile changes among continuing education students were: sex, race, age, marital status, institution in home county, and residence while enrolled. Data on demographic characteristics are presented in Table 4.

Sex

Between 1969 and 1979, the proportion of female continuing education students increased from 60 to 69 percent, while they decreased to 65 percent in 1988. Forty percent of the continuing education students were male in 1969, compared to 29 percent in 1979. However, between 1979 and 1988, the male continuing education student enrollments increased to 35 percent. In general, female continuing education student proportions have increased, while male continuing education student proportions have decreased over the past two decades.

Race

Between 1969 and 1988, the proportion of non-white students enrolled in the continuing education program area has increased slightly from 20 to 25 percent. The largest proportion of non-white continuing education students was 32 percent, which was reported in the 1974 study.

Age

North Carolina community colleges are serving increasingly older continuing education students in its various programs. Between 1969 and 1988, the proportions of continuing education students in the 19 or younger, the 20-25, and the 26-29 age categories decreased. However, within the 19 or younger age category there was a 3 percent increase between the 1979 and 1988 enrollments. While the majority of continuing

Table 4 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, 1969, 1974, 1979, 1988, by sex, race, age, marital status, location of institution, and residence while enrolled

Variable	Continuing education students 1969	1974	1979	1988
Sex:				
Female	59.6	68.6	71.2	64.8
Male	40.4	31.4	28.8	35.2
Total	100.0	100.0	100.0	100.0
Race:				
Nonwhite	20.1	32.3	23.2	25.0
White	79.9	67.7	76.8	75.0
Total	100.0	100.0	100.0	100.0
Age:				
19 or younger	11.2	8.3	6.0	9.2
20-25	20.9	20.4	15.1	13.2
26-29	11.5	11.0	10.4	7.1
30 or older	56.5	60.4	68.4	70.5
Total	100.1	100.1	99.9	100.0
Marital status:				
Single	18.6	18.8	18.0	21.8
Married	72.2	67.8	61.5	55.8
Separated	2.3	2.8	2.8	3.9
Widowed	4.0	7.9	13.3	12.6
Divorced	3.0	2.6	4.4	5.9
Total	100.1	99.9	100.0	100.0
Institution in home county:				
Yes	77.5	77.4	85.0	86.1
No	22.5	22.6	15.1	13.9
Total	100.0	100.0	100.1	100.0
Residence while enrolled:				
With parents	29.8	9.8	10.5	12.0
With spouse	54.7	68.8	59.1	52.4
Other	15.5	21.4	30.4	35.6
Total	100.0	100.0	100.0	100.0

education students have been 30 years of age or older during the last twenty years, the proportions have increased from 57 percent in 1969 to 71 percent in 1988.

Marital Status

The major change in the marital statuses of continuing education students was the decline in the proportion of married students from 72 percent in 1969 to 56 percent in 1988. While the proportions of single continuing education students remained fairly constant between 1969 and 1979, a slight increase was observed between 1979 and 1988. An increase in the proportions of separated, widowed, and divorced continuing education students was observed between 1969 and 1988.

Location of Institution

Between 1969 and 1988, there have been increases in the proportions of continuing education students attending institutions in their home county. The percentages have increased from 78 to 86 percent over the past two decades.

Residence While Enrolled

Important changes in the residence patterns of continuing education students have occurred between 1969 and 1988. In 1969, 30 percent of the students indicated they were living with parents, compared to 12 percent in 1988. The continuing education students who reported living with their spouse increased sharply between 1969 and 1974, from 55 to 69 percent. However, between 1974 and 1988 the proportions decreased from 59 to 52 percent. Between 1969 and 1988 there was a 16 to 36 percentage increase in the continuing education students who reported "other" for their living arrangements.

Socioeconomic Characteristics

The socioeconomic characteristics used in describing profile changes among continuing education students were: student's education, father's education, mother's education, and student's employment status. These data are presented in Table 5.

Student's Education

Between 1969 and 1988, there has been a decrease in the proportions of continuing education students who reported having a high school level of education of less. The proportion of continuing education students with some college education has increased from 20 percent in 1969 to 39 percent in 1988. Overall, 1988 continuing education students were a more highly educated population than were their 1969 counterparts.

Table 5 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, 1969, 1974, 1979, 1988, by student's education, father's education, mother's education, and student's employment status

Variable	Continuing education students 1969	1974	1979	1988
Student's education:				
8th grade or less	14.0	14.4	17.2	12.7
Some high school	27.3	20.6	18.7	18.4
High school graduate	35.0	35.0	29.2	26.6
GED	4.0	3.2	2.9	3.8
1+ yrs postsecondary	19.6	26.8	32.0	38.5
Total	99.9	100.0	100.0	100.0
Father's education:				
8th grade or less	46.6	55.2	50.3	41.9
Some high school	23.2	15.2	13.9	15.3
High school graduate	17.8	17.7	20.5	22.6
GED	1.9	0.6	1.3	2.0
1+ yrs postsecondary	10.6	11.4	14.0	18.2
Total	100.1	100.1	100.0	100.0
Mother's education:				
8th grade or less	38.1	44.6	42.2	33.7
Some high school	28.0	19.6	18.8	17.9
High school graduate	22.2	22.7	24.7	27.7
GED	1.8	0.4	1.1	2.0
1+ yrs postsecondary	10.0	12.8	13.3	18.7
Total	100.1	100.1	100.1	100.0
Student's employment status:				
Full-time	65.3	49.5	45.1	46.6
Part-time	9.4	11.2	10.0	10.2
Unemployed, other	25.3	39.2	44.9	43.2
Total	100.0	99.9	100.0	100.0

Father's Education

In general, continuing education students have reported that the level of their father's education has increased between 1969 and 1988. Since 1969, the proportion of students whose fathers had an eighth grade or less education has decreased from 47 to 42 percent. At the same time, the proportion of those whose fathers had at least some postsecondary education has increased from 11 to 18 percent.

Mother's Education

Continuing education students reported that the level of their mother's education was higher in 1988 than in 1969. Since 1969, the proportion of students whose mothers had an eighth grade or less education has decreased from 38 to 34 percent. At the same time, the proportion of students whose mothers had at least some postsecondary education has increased from 10 to 19 percent in 1988.

Student's Employment Status

Most continuing education students continue to report working full or part-time but at decreasing levels over the past two decades, from 75 to 57 percent. The proportion of students employed part-time has remained relatively constant over the 20 year period. The "unemployed, other" category has increased from 25 percent in 1969 to 43 percent in 1988. The "unemployed, other" category represented full-time students, homemakers, retirees, the unemployed, and those on active duty in the military.

Attendance Characteristics

The attendance characteristics used in describing profile changes among continuing education students were: time of attendance, distance to class one way, and choice of institutions. Attendance characteristics data are found in Table 6.

Time of Attendance

Since 1969, the proportions of continuing education students enrolled during the day has steadily increased. In 1969, 14 percent of the students were enrolled during the day as compared to 41 percent in 1988. The majority of all continuing education students continue to attend evening classes.

Distance to Class

Since 1969, the proportions of continuing education students who traveled from 0 - 15 miles has remained fairly constant. In contrast to the 1969 proportions of continuing education students, those students enrolled in 1988 who traveled 16-25 miles or over 31 miles have increased slightly.

Table 6 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, 1969, 1974, 1979, 1988, by time of attendance, distance to class, would have attended another institution had this one not existed

Variable	Continuing education students 1969	1974	1979	1988
Time of attendance:				
Day	14.2	29.3	38.8	40.5
Evening	85.8	70.7	61.2	59.5
Total	100.0	100.0	100.0	100.0
Distance to class one way:				
0 - 15 miles	88.6	91.6	89.4	86.2
16 - 25	7.8	6.4	7.8	9.1
26 - 30	2.0	0.8	1.3	2.0
31 or more	1.6	1.1	1.5	2.7
Total	100.0	99.9	100.0	100.0
Would have attended another institution had this one not existed:				
Yes	27.8	20.6	21.4	34.6
No	72.2	79.4	78.6	65.4
Total	100.0	100.0	100.0	100.0

Would Have Attended Another Institution

The trend between 1969 and 1979 indicated that continuing education students were not likely to attend another institution. However, this survey revealed a marked departure from that trend. Between 1979 and 1988, there was an increase in the proportions of continuing education students who reported they would have attended another institution, from 21 to 35 percent. It is important to note that almost two thirds of all continuing education students would not have attended another college had the one they were attending not existed.

Highlights of Continuing Education Student Profile Changes

Sex: Women are the majority of continuing education students in North Carolina community colleges. Their percentages have increased from 60 percent in 1969 to 65 percent in 1988.

Race: The proportions of nonwhite continuing education students have increased from 20 percent in 1969 to 25 percent in 1988.

Age: Continuing education students are becoming older. The percentage of students 30 years of age and older increased from 57 percent in 1969 to 71 percent in 1988. There was a slight increase in the 19 or younger age category from 6 percent in 1979 to 9 percent in 1988.

Marital Status: Most continuing education students are married but the percentages have decreased from 72 percent in 1969 to 56 percent in 1988.

Student's Education: A majority of all continuing education students have a high school level of education or less but the percentages have been decreasing from 80 percent in 1969 to 61 percent in 1988. Conversely, the percentages of students with some postsecondary education have been increasing from 20 percent in 1969 to 39 percent in 1988.

Employment Status: Most continuing education students continue to be employed either full or part-time but the percentages have been decreasing from 75 percent in 1969 to 57 percent in 1988. The trend for the unemployed or other category has been increasing from 25 percent in 1969 to 43 percent in 1988.

Institution Choice: Two thirds of continuing education students would not have attended another institution, yet this trend is decreasing from 72 percent in 1969 to 65 percent in 1988.

Time of Attendance: The majority of continuing education students attended evening classes but the percentages have been decreasing from 86 percent in 1969 to 60 percent in 1988.

Chapter 5
Student Enrollment Changes and Comparisons with the North Carolina Adult Population

The extent to which the North Carolina Community College System is succeeding in serving the adults of North Carolina can be determined by examining enrollment trends in relation to North Carolina adult population trends. Changes in the overall representativeness of students must take into account adult population changes in order to evaluate the college's ability to serve a representative cross-section of the state's population.

The changes in the state's adult population and in curriculum and continuing education student enrollments between 1979 and 1988 are examined in this chapter in terms of selected demographic and socioeconomic characteristics. The demographic characteristics were sex, race, and age; and the socioeconomic characteristics were student's education and occupation of head of household. This chapter highlights changes over time in student enrollments and a comparison between student enrollments and the projected adult population.

Tables 7, 8, and 9 present the enrollment and population percentages for 1979 and 1988 on selected demographic and socioeconomic characteristics as well as the representation index. The representation index defines the overall representativeness of students on North Carolina community college campuses when the changes in the North Carolina adult population are taken into account. The representation index equals the percentage difference of student enrollments with regards to a selected variable minus the percentage difference of the North Carolina adult population between these two points in time. A positive number indicates an increase in proportional enrollments which takes population changes into account. A negative number indicates a decrease in proportional enrollments which takes population changes into account.

The proportions appearing for the North Carolina adult population in the 1979 column were taken from the 1979-80 student profile project technical report. The 1979 proportions were projections of the 1979 adult population made by Dr. R. David Mustian, Professor of Sociology, North Carolina State University at Raleigh. The North Carolina adult population proportions appearing in the 1988 column are projections made by Dr. Stephen C. Lilley, Associate Professor of Sociology, North Carolina State University at Raleigh. The adult population was defined as individuals 18 years and older although the study sample reflected students who were 16 years of age and older.

Demographic Characteristics

The selected demographic characteristics used in describing enrollment and population changes were: sex, race, and age. Data for these characteristics are found in Table 7.

Sex

Between 1979 and 1988 there was a slight increase in the proportion of females in the state's adult population from 53 to 54 percent, and likewise a decrease in the male adult population. The data showed an increase in the proportion of female curriculum enrollments, from 54 to 62 percent, and a decrease in the proportion of female continuing education students, from 71 to 65 percent. After adjustment for female adult population changes, female curriculum student enrollments increased in representation by approximately seven percent, while the female continuing education student enrollments declined in representation by eight percent. Conversely, male curriculum student enrollments decreased in representation by seven percent, while the male continuing education student enrollments gained in representation by eight percent.

Race

Black curriculum student enrollments in North Carolina community colleges declined from 21 percent in 1979 to 17 percent during the fall of 1988. After adjustment for changes in black student enrollments and in the black adult population, black curriculum student enrollments declined in representation by approximately five percent. Black continuing education student enrollments in 1979 and 1988 comprised proportions which were approximately equal to the black adult population proportion. White curriculum student enrollments increased in representation by four percent, whereas there was a slight decline in representation among the white continuing education student enrollments.

Age

It is important to note that since 1979, the state adult population has decreased for young adults aged 29 or less. During the same time period for the state's adult population, all age categories except the 50-59 age category showed population increases. After adjusting for adult population changes, the curriculum students who were 22 years of age or less gained in representation by three percent, whereas there was a six percent gain in representation for continuing education students who were 22 years of age or less. Among older students (50 and older) there was minimal or no growth in the program areas. Adjusted proportions maintained about a two percent gain in representation among curriculum adults 50 to 59, and a decline in representation for the 60-69 and 70 or older age groups. Among proportional enrollments for continuing education students past the age of 50, there was a loss in representation in the 50-59 age

Table 7 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, as compared to the adult population of North Carolina, 1979 and 1988, by sex, race, age, proportional changes over the nine year period, and representation index*

Variable	Students					
	Curriculum			Continuing education		
	1979	1988	Change	1979	1988	Change
Sex:						
Female:						
Student enrollments	53.6	62.0	8.4	71.2	64.8	-6.4
NC adult population	52.6	54.4	1.8	52.6	54.4	1.8
Representation index			6.6			-8.2
Male:						
Student enrollments	46.4	38.0	-8.4	28.8	35.2	6.4
NC adult population	47.4	45.6	-1.8	47.4	45.6	-1.8
Representation index			-6.6			8.2
Race:						
Black:						
Student enrollments	20.9	16.5	-4.4	20.8	20.8	0.0
NC adult population	20.1	20.4	0.3	20.1	20.4	0.3
Representation index			-4.7			-0.3
White:						
Student enrollments	76.5	79.7	3.2	76.8	75.1	-1.7
NC adult population	78.9	77.8	-1.1	78.9	77.8	-1.1
Representation index			4.3			-0.6
Other:						
Student enrollments	2.6	3.8	1.2	2.4	4.1	1.7
NC adult population	1.0	1.8	0.8	1.0	1.8	0.8
Representation index			0.4			0.9
Age:						
22 or less:						
Student enrollments	39.0	39.0	0.0	13.1	15.8	2.7
NC adult population	14.9	11.6	-3.3	14.9	11.6	-3.3
Representation index			3.3			6.0
23-29:						
Student enrollments	28.0	22.2	-5.8	18.5	13.7	-4.8
NC adult population	17.1	16.1	-1.0	17.1	16.1	-1.0
Representation index			-4.8			-3.8

Table 7 (continued)

Variable	Students: Curriculum 1979	Curriculum 1988	Curriculum Change	Continuing education 1979	Continuing education 1988	Continuing education Change
Age, continued:						
30-39:						
Student enrollments	19.9	21.5	1.6	20.5	19.0	-1.5
NC adult population	19.3	21.4	2.1	19.3	21.4	2.1
Representation index			-0.5			-3.4
40-49:						
Student enrollments	8.3	11.3	3.0	13.3	16.5	3.2
NC adult population	14.5	16.3	1.8	14.5	16.3	1.8
Representation index			1.2			1.4
50-59:						
Student enrollments	2.7	3.6	0.9	12.7	9.7	-3.0
NC adult population	14.1	12.6	-1.5	14.1	12.6	-1.5
Representation index			2.4			-1.5
60-69:						
Student enrollments	1.8	1.8	0.0	11.0	12.2	1.2
NC adult population	11.2	11.4	0.2	11.2	11.4	0.2
Representation index			-0.2			1.0
70 or older:						
Student enrollments	0.3	0.6	0.3	10.9	13.1	2.2
NC adult population	8.9	10.6	1.7	8.9	10.6	1.7
Representation index			-1.4			0.5

* The representation index defines the overall representativeness of students on North Carolina community college campuses when the North Carolina adult population changes are taken into account. In this and subsequent tables, the representation index equals the percent difference of student enrollments in regards to a selected variable minus the percentage difference of the North Carolina adult population. A positive number indicates an increase in proportional enrollments when population changes are considered. A negative number indicates a decrease in proportional enrollments when population changes are considered.

group and gains in representation for the 60-69 and 70 or older age groups. The largest declines in representation were observed in the 23-29 age group in both program areas, while the largest gains in representation were in the 22 or less age categories for both program areas.

Socioeconomic Characteristics

The socioeconomic characteristics used in describing enrollments and population changes were student's education and occupation of head of household. These data are found in Tables 8 and 9.

Student's Education

Between 1979 and 1988, the data indicated a decrease in the proportions of North Carolina adults with less than a high school diploma from 55 percent to 32 percent. Among community college students enrolled with less than a high school diploma, there were percentage decreases in the curriculum and continuing education program areas except for curriculum students with some high school. The decreases in the state adult population with less than a high school diploma were greater than the decreases in the student enrollments with the same level of education in both program areas. Therefore, gains in representation were observed for student enrollments with lower levels of education. However, enrollment of students with less than a high school diploma are very under-represented in curriculum programs.

In both program areas, the percentage of students enrolled who were high school graduates decreased while high school graduates were increasing in the adult population. Enrollments of students with one to three years of postsecondary education increased at a lower percent than in the state adult population. The enrollment of curriculum and continuing education students with a high school diploma or higher level of education showed declines in representation when compared to the adult population. However, students with a high school diploma or one to three years of college were over-represented in the curriculum programs.

In summary, in 1979 and 1988 curriculum programs served a disproportionate number of students with a high school education and one to three years of postsecondary education. Between 1979 and 1988, the continuing education students enrollments tended to mirror the shifts that were found in the adult population. The major increase in enrollments between 1979 and 1988 for continuing education students was in the one to three year postsecondary education level.

Table 8 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, as compared to the adult population of North Carolina, 1979 and 1988, by education, proportional changes over the nine year period, and representation index

Variable	Students					
	Curriculum			**Continuing education**		
	1979	1988	Change	1979	1988	Change
Student's education:						
8th grade or less:						
Student enrollments	0.8	0.5	-0.3	17.2	12.7	-4.5
NC adult population	24.9	16.9	-8.0	24.9	16.9	-8.0
Representation index			7.7			3.5
Some high school:						
Student enrollments	2.8	3.3	0.5	18.7	18.4	-0.3
NC adult population	30.4	15.3	-15.1	30.4	15.3	-15.1
Representation index			15.6			14.8
High school graduate (includes GED):						
Student enrollments	47.8	42.4	-5.4	32.1	30.0	-2.1
NC adult population	24.6	34.3	9.7	24.6	34.3	9.7
Representation index			-15.1			-11.8
1-3 year(s) of postsecondary:						
Student enrollments	40.2	45.2	5.0	16.2	23.3	7.1
NC adult population	9.5	16.9	7.4	9.5	16.9	7.4
Representation index			-2.4			-0.3
College graduate or more:						
Student enrollments	8.4	8.6	0.2	15.8	15.6	-0.2
NC adult population	10.6	16.6	6.0	10.6	16.6	6.0
Representation index			-5.8			-6.2

Occupation Head of Household

When considering the North Carolina adult population changes between 1979 and 1988, the data indicated percentage increases in the executive/professional/specialty/technician, sales/administrative support, and service occupational categories and decreases in the precision production, operators/fabricators/laborers, and farm/forest/fish occupational categories. Among the curriculum student enrollments there was a 9 percent increase in the executive/professional/specialty/technician occupational category and a 3 percent increase in the sales/administrative support category. Within these two categories among the continuing education student enrollments, there were percentage increases but at lower levels than the curriculum student enrollments. The higher status occupational category--executive/professional/specialty/technicians was more over-represented by curriculum student enrollments in 1988 than in 1979.

Curriculum enrollments showed a proportional increase in representation among three occupational categories: executive/professional/specialty/technicians, operators/fabricators/laborers, and farm/forest/fish. There was a decline in representation of the sales/administrative support, precision production, and service occupational categories among curriculum students. In continuing education student enrollments there were increases in representation in the operators/fabricators/laborers and the farm/forest/fish occupational categories.

Comparisons Between Student Enrollments and the North Carolina Adult Population

The previous section has examined the changes in the community college student enrollments and the changes in the adult population between 1979 and 1988. A representation index was defined to identify the overall representativeness of enrolled students when changes in the adult population where taken into account. The analysis between the current data and the 1979 data identified gains and declines in representation over the last decade.

This section will present a comparison of selected demographic and socioeconomic characteristics of 1988 student enrollments, with characteristics of the projected 1988 adult population, The selected demographic characteristics were: sex, race, and age. The socioeconomic characteristics were: student's education, primary income, and occupation head of household.

Table 9 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, as compared to the adult population of North Carolina, 1979 and 1988, by occupational category of head of household, proportional changes over the nine year period, and representation index

Variable	Students					
	Curriculum			**Continuing education**		
	1979	1988	Change	1979	1988	Change
Occupational category of head of household:						
Executive, professional specialty, technicians:						
Student enrollments	32.5	41.5	9.0	32.9	34.9	2.0
NC adult population	18.4	22.8	4.4	18.4	22.8	4.4
Representation index			4.6			-2.4
Sales, administrative support:						
Student enrollments	14.6	18.0	3.4	10.8	13.4	2.6
NC adult population	20.1	25.4	5.3	20.1	25.4	5.3
Representation index			-1.9			-2.7
Precision production:						
Student enrollments	20.2	15.3	-4.9	20.7	19.7	-1.0
NC adult population	14.5	14.0	-0.5	14.5	14.0	-0.5
Representation index			-4.4			-0.5
Operators, fabricators, laborers:						
Student enrollments	18.3	14.5	-3.8	18.4	14.9	-3.5
NC adult population	31.3	23.4	-7.9	31.3	23.4	-7.9
Representation index			4.1			4.4
Service:						
Student enrollments	10.6	7.6	-3.0	11.5	11.3	-0.2
NC adult population	10.9	11.4	0.5	10.9	11.4	0.5
Representation index			-3.5			-0.7
Farm, forest, fish:						
Student enrollments	3.9	3.1	-0.8	3.5	5.8	2.3
NC adult population	4.8	2.9	-1.9	4.8	2.9	-1.9
Representation index			1.1			4.2

Demographic Comparisons

Comparisons were made between community college students and the North Carolina adult population on the demographic characteristics of sex, race, and age. The data are found in Table 10.

Sex

When the distribution of students was compared to the state's projected 1988 adult population on the characteristic of sex, it was found that 62 percent of the curriculum students and 65 percent of the continuing education students were female compared to 54 percent in the adult population. Thirty-eight percent of the curriculum students and 35 percent of continuing education students were male compared to 46 percent in the adult population. The findings indicated that female students were over-represented in both program areas while male students were under-represented.

Race

In 1988, the proportion of white students enrolled in North Carolina community colleges in both program areas was similar to the 1988 projected population of whites. Blacks comprised 20 percent of the projected adult population and 21 percent of the continuing education student enrollments. However, black curriculum students (17 percent) were under-represented when compared to the 1988 projected black North Carolina adult population (20 percent). Community colleges enrolled a slightly higher proportion (four percent) of other nonwhite racial groups than existed in the North Carolina adult population (two percent) in both program areas. In summary, black curriculum students were under-represented while "other" races were slightly over-represented in the curriculum and continuing education program areas.

Age

Although the age distributions of continuing education students closely paralleled the age distributions in the projected 1988 adult population, enrollments in curriculum programs were skewed toward the younger age groups. Thirty-seven percent of the curriculum students were 22 years of age or younger, more than three times the proportion of the age category in the North Carolina adult population, and the majority of curriculum students were under 29 years of age. Sixty percent of the curriculum students were under 30 years of age, while 28 percent of the state population were under 30 years of age. The findings indicated that curriculum students tended to be over-represented in the younger age categories and under-represented in the older age categories when compared to the adult population. The distribution of continuing education students in all age groups approximated the state adult population with minor variations.

Table 10 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall, 1988, and the projected 1988 adult population of North Carolina by sex, race, and age

Variable	NC adult population*	Students	
		Curriculum	Continuing education
Sex:			
Female	54.4	62.0	64.8
Male	45.6	38.0	35.2
Total	100.0	100.0	100.0
Race**:			
Black	20.4	16.5	20.8
White	77.8	79.7	75.1
Other	1.8	3.8	4.1
Total	100.0	100.0	100.0
Age:			
18-22	11.6	37.2	12.0
23-29	16.1	22.8	14.2
30-39	21.4	22.1	19.8
40-49	16.3	11.7	17.3
50-59	12.6	3.7	10.2
60-69	11.4	1.9	12.8
70-79	7.3	0.6	11.4
80 & older	3.3	0.0	2.3
Total	100.0	100.0	100.0

*All adult population figures in this and succeeding tables were projections made by Dr. Stephen C. Lilley, Associate Professor of Sociology, North Carolina State University at Raleigh. The adult population was defined as individuals 18 and older although the study sample reflected students who were 16 years of age and older.

**The North Carolina Office of State Budget and Management reported that 22.2 percent of the North Carolina population was "other." They further stated that about 92 percent of the race census category entitled "other" was made up of Blacks. To obtain a Black category for the purpose of this study, 92 percent of the 22 percent classified as "other" was defined as Black.

Socioeconomic Comparisons

Characteristics used in the socioeconomic comparisons between 1988 North Carolina community college student enrollments and the North Carolina projected 1988 adult population were student's education level, primary income, and occupation of head of household. Table 11 presents the socioeconomic data with regard to students and the adult population.

Student's Education

Substantial differences existed between the levels of education reported by curriculum students and the educational levels of the projected 1988 adult population. Approximately four percent of curriculum students had less than a high school of education, while 32 percent of the adult population had less than a high school education.

In contrast, the education levels of the 1988 North Carolina adult population and the educational levels of continuing education students were similar. Continuing education programs appeared to enroll a representative cross-section of adults with regard to levels of education.

Primary Income

Primary income was based on the reported 1987 income of the head of household. If the respondent indicated self or spouse as head of household, the student's income was considered primary. If the respondent indicated father or mother as head of household, the parent's income was considered primary. The distributions for curriculum and continuing education student enrollments were based upon primary income, i.e., that of the family--own or parental--which the student identified as the major source of support. The income reported for the North Carolina adult population represented 1986 income figures.

The data in Table 11 indicated that students in both program areas appeared to be approximately representative of the adult population when considering primary income. The only exception appeared to be among continuing education students who earn less than $5,000 (13 percent) when compared to the adult population figure of five percent.

Occupation of Head of Household

When the distributions of occupational categories in the state's projected adult population were compared to those of North Carolina community college students several differences were observed. For the adult population, administrative support

Table 11 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall, 1988, and the projected adult population of North Carolina by student's education, primary income, and occupational category of head of household

Variable	NC adult population	Students	
		Curriculum	Continuing education
Student's education*:			
8th grade or less	16.9	0.5	12.7
Some high school	15.3	3.3	18.4
High school/GED	34.3	42.4	30.0
1-3 yr postsecondary	16.9	45.2	23.3
College graduate	16.6	8.6	15.6
Total	100.0	100.0	100.0
Primary income**:			
$0-$4,999	4.7	4.9	13.0
$5,000-$7,499	4.3	3.4	5.8
$7,500-$9,999	4.8	4.2	4.4
$10,000-$14,999	9.6	10.6	10.6
$15,000-$19,999	12.2	11.2	10.5
$20,000-$24,999	12.2	11.8	11.2
$25,000-$29,999	9.8	10.1	10.8
$30,000-$39,999	18.8	14.8	13.5
$40,000-$49,999	9.5	10.4	9.1
$50,000 and over	14.3	18.6	11.1
Total	100.2	100.0	100.0
Occupational category of head of household***:			
Executive, administration	9.6	20.9	18.6
Professional, specialty	10.4	12.7	12.3
Technicians, support	2.7	7.9	4.0
Sales	11.1	7.1	4.6
Administrative support	14.3	10.9	8.9
Service	11.4	7.6	11.3
Farm, forest, fish	2.9	3.1	5.8
Precision, craft	14.0	15.3	19.6
Machine operator	13.7	7.6	6.7
Transportation	4.2	3.8	5.1
Handlers, laborers	5.5	3.1	3.1
Total	99.8	100.0	100.0

*Projections based on North Carolina's 1980 adult population 25 years of age or older.
**North Carolina income data were reported by the Current Population Survey, Annual Demographic File, March 1987, Bureau of Census and tabulated by the North Carolina Office of State Budget and Management. North Carolina income represents the prior calendar year 1986. Like student responses, NC income data reflects total family income. The student primary income represents the 1987 calendar year.
***The 52 occupations listed in questionnaire number 46 were collapsed into 11 census categories reflected by 1980 U.S. Census classifications. Three survey occupations (Homemaker, Student/Retired/Unemployed, Other) were eliminated for comparative purposes. North Carolina data were reported by the U.S. Department of Labor, Bureau of Labor Statistics, April 1988. Data reflect the 1987 calendar year and are found in the Geographic Profile of Employment and Unemployment, 1987, Bulletin 2305, Table 14.

(14 percent), precision/craft (14 percent) and machine operators (14 percent) were the largest occupational groups represented in the adult population of North Carolina. The largest proportions of curriculum students (21 percent) reported the occupations of head of household as in the executive/administration category, while the largest proportion of continuing education students (20 percent) cited the precision/craft category. For both student groups, the executive/administration occupational group was over-represented, where as the sales and machine operator occupational groups were under-represented when comparisons were made between the student groups and the adult population.

Highlights of Student Enrollment Changes and North Carolina Adult Population Changes Between 1979 and 1988

Sex: Between 1979 and 1988, after adjusting for changes in student enrollments and the projected North Carolina adult population, female curriculum student enrollments increased in representation by seven percent while the female continuing education student enrollments declined in representation by eight percent. Likewise, the male enrollments showed gains in representation in the continuing education program area.

Race: Black curriculum student enrollments declined in representation by five percent, whereas black continuing education student enrollments were approximately equal to the black adult population.

Age: The largest gains in representation were in the 22 or less age categories for both program areas. Within the 23-29 age group in both program areas, the largest declines in representation were observed.

Student's Education: Between 1979 and 1988, there were gains in the representation of curriculum and continuing education students with the lowest levels of education--8th grade of less, and some high school educational levels. However, for curriculum students, this gain in representation must be interpreted with the fact that students with less than a high school diploma are very under-represented. In contrast, enrollments of students with a high school diploma or higher level of education showed declines in representation.

Occupations of Head of Household: Curriculum and continuing education student enrollments showed gains in representation among two occupational categories--operators/fabricators/laborers and farm/forest/fish. The largest gain in representation for curriculum students was in the executive/professional/specialty and technician occupational category.

Highlights of Comparing 1988 Student Enrollments with the 1988 Projected North Carolina Adult Population

Sex: Female students were over-represented in both program areas, while male students were under-represented.

Race: Black curriculum students were under-represented, while "other" races were slightly over-represented in the curriculum and continuing education program areas.

Age: Curriculum students tended to be over-represented in the younger age categories and under-represented in the older age categories. The distribution of continuing education students of all age groups approximated the state adult population with minor variations.

Student's Education: Curriculum students with lower levels of education were under-represented while those with a high school diploma or some college were over-represented. Continuing education programs appeared to enroll a representative cross-section of adults with regards to levels of education.

Primary Income: Curriculum and continuing education students appeared to be approximately representative of the adult population when considering primary income.

Occupation of Head of Household: For both student groups, the executive/administrative occupational group was over-represented, whereas the sales and machine operator occupational groups were under-represented.

PART III.
PROFILES OF CURRENTLY ENROLLED COMMUNITY COLLEGE STUDENTS

Part III includes three chapters that present indepth student profiles on currently enrolled students in terms of demographic, socioeconomic, academic, and attendance characteristics. Each chapter concludes with highlights of the profiles. In Chapter 6 the profiles of curriculum and continuing education students are described. Chapter 7 presents profiles of curriculum students by the program areas of college transfer, general education, technical education, and vocational education. Chapter 8 includes indepth descriptions of continuing education students in terms of the following educational program areas: academic, preparatory, avocational, occupational, and practical skills.

Chapter 6
Profiles of Curriculum and Continuing Education Students

Profiles of curriculum and continuing education students enrolled in the fall of 1988 are presented in this chapter. The profiles are described in terms of demographic, socioeconomic, academic, and attendance characteristics. These profiles are based on all 50 questions presented on the survey research instrument (Appendix F). Highlights of curriculum and continuing education student profiles are found at the end of this chapter.

Demographic Characteristics

The demographic characteristics used in describing the current student profiles were: sex, race, age, marital status, veteran status, residence while enrolled, and change of residence to attend. These data are presented in Tables 12 and 13.

Sex

Female students clearly constituted the majority of all North Carolina community college students. Sixty-two percent of all curriculum students and 65 percent of all continuing education students were female.

Race

Four out of five curriculum students were white, while three out of four continuing education students were white. Black students comprised 17 percent of the curriculum enrollment and 21 percent of the continuing education enrollment. Other racial groups were distributed similarly between the curriculum and continuing education program areas.

Age

The data in Table 12 indicate that curriculum students were much younger than continuing education students. Students who were 22 years of age or younger comprised 39 percent of the curriculum enrollment compared to 16 percent of the continuing education enrollment. Sixty-one percent of curriculum students were under thirty years of age, compared to 70 percent of continuing education students who were 30 years of age and older. One fourth of all continuing education students were 60 years of age and older.

Table 12 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by sex, race/ethnicity, age, marital status, and veteran status

Variable	Students	
	Curriculum	Continuing education
Sex:		
Female	62.0	64.8
Male	38.0	35.2
Total	100.0	100.0
Race:		
American Indian	1.3	1.3
Asian	1.2	0.9
Black	16.5	20.8
Hispanic	0.8	1.4
White	79.7	75.1
Other	0.5	0.5
Total	100.0	100.0
Age:		
22 and under	39.0	15.8
23-29 years	22.2	13.7
30-39 years	21.5	19.0
40-49 years	11.3	16.5
50-59 years	3.6	9.7
60-69 years	1.8	12.2
70-79 years	0.6	10.9
80 and over	0.0	2.2
Total	100.0	100.0
Marital status:		
Single, never married	48.2	21.8
Married, not separated	40.3	55.8
Separated	3.3	3.9
Widowed	1.3	12.6
Divorced	6.9	5.9
Total	100.0	100.0
Veteran status:		
Yes	10.6	10.8
No	89.4	89.2
Total	100.0	100.0

Marital Status

Curriculum and continuing education students differed with regard to marital status. The typical curriculum student was more likely to be single than married. Forty-eight percent of the curriculum students were single compared to 40 percent who were married. The majority of continuing education students were married. There were slight differences between curriculum and continuing education students when considering those separated or divorced. However, continuing education students were nine times more likely than curriculum students to be widowed.

Veteran Status

There were essentially no differences between the two student groups with regard to veteran status. Eighty-nine percent of curriculum and continuing education students were not military veterans.

Residence While Enrolled

Curriculum and continuing education students varied in terms of where they lived while they were enrolled. Among curriculum students, one third lived with their parents, and 39 percent lived with spouse and children while attending college. A majority of continuing education students lived with spouse and children, whereas 16 percent lived alone.

Change of Residence to Attend

The overwhelming majority of curriculum (96 percent) and continuing education students (98 percent) did not change their residence to attend the community college. Curriculum students (17 percent) were more likely to commute from another county to attend than were continuing education students (10 percent).

Socioeconomic Characteristics

The socioeconomic characteristics observed were: student's education, father's education, mother's education, head of household, student's income, parents' income, primary income, occupation of head of household, employment status, and hours worked per week. The data are found in tables 14, 15, and 16.

Education--Student and Parents

Almost all of the curriculum students (96 percent) had a high school or postsecondary level of education compared to 69 percent of the continuing education students. It is important to note that 31 percent of the continuing education students had an 11th grade level of education or less. However, more continuing education students were college

Table 13 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by residence while enrolled and change of residence to attend

Variable	Students	
	Curriculum	Continuing education
Residence while enrolled:		
Parents	34.3	12.0
Spouse and children, if any	39.0	52.4
Children only	5.4	5.5
Other relatives	2.1	1.9
Board	0.7	0.5
Live alone	9.0	16.2
Live with friends	6.3	2.3
Other, not listed	3.2	9.2
Total	100.0	100.0
Change of residence to attend:		
No:		
Institution in home county	72.4	83.1
Commute from other NC county	17.3	10.2
Moved for other reasons	6.1	4.3
Yes:		
Moved to attend	2.5	0.7
Moved from out of state	1.1	1.0
Moved from another country	0.6	0.7
Total	100.0	100.0

graduates. The data show a greater range of education levels among continuing education students than curriculum students.

The mothers of students in both groups tended to have more formal education than the fathers. Curriculum students' parents were more likely than continuing education students' parents to have completed high school. There was no difference in the proportion of postsecondary education achieved by the mothers and fathers of curriculum students (32 percent). Likewise, there was no difference in the proportion of postsecondary education achieved by the parents of continuing education students (18 percent).

Overall, the students had higher levels of education than their parents. More than one half of the curriculum students (54 percent) had postsecondary education compared to almost one third of their parents. Among continuing education students, 39 percent reported postsecondary education compared to 18 percent of their parents.

Table 14 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by student's education, father's education, and mother's education

Variable	Students	
	Curriculum	Continuing education
Student's education:		
8th grade or less	0.5	12.7
9th-11th grade	3.3	18.4
High school graduate	36.3	26.2
GED	6.1	3.8
One year beyond high school	21.5	8.9
Diploma program	4.4	2.1
Two years of college	10.7	6.6
Associate degree	4.7	3.5
Three years of college	3.9	2.2
College graduate	6.3	9.3
Graduate work	2.3	6.3
Total	100.0	100.0
Father's education:		
8th grade or less	19.7	41.9
9th-11th grade	14.6	15.3
High school graduate	29.8	22.6
GED	3.2	2.0
One year beyond high school	5.4	2.4
Diploma program	1.5	1.3
Two years of college	6.2	3.4
Associate degree	2.9	1.4
Three years of college	1.4	1.0
College graduate	10.7	6.1
Graduate work	4.6	2.6
Total	100.0	100.0
Mother's education:		
8th grade or less	12.5	33.7
9th-11th grade	14.8	17.9
High school graduate	36.2	27.7
GED	4.1	2.0
One year beyond high school	6.5	3.8
Diploma program	2.8	1.5
Two years of college	7.0	4.7
Associate degree	3.2	1.1
Three years of college	1.6	1.0
College graduate	8.2	4.9
Graduate work	3.1	1.7
Total	100.0	100.0

Head of Household

Based on the data in Table 15, curriculum students were almost equally likely to report their parents as head of household (37 percent) as themselves (35 percent). Among continuing education students 46 percent reported themselves as head of household and 35 percent reported a spouse in that role. Fathers were more likely to be reported as head of household than mothers.

Income--Student, Parents, and Primary

The reported level of student's income for 1987 was slightly higher for continuing education students than curriculum students. Approximately one half of all students reported incomes of less than $20,000. For reported student income levels of $30,000 or more, the proportion of continuing education students (29 percent) was slightly larger than that of curriculum students (26 percent). Approximately 20 percent of all students reported incomes of less than $5,000.

Curriculum students (46 percent) were more likely to report parents' income for 1987 at the $30,000 or more level than continuing education students (23 percent). The largest proportion of continuing education students reported their parents not living. Curriculum and continuing education students reported that their parents' income was higher than their own.

Primary income was based on the reported 1987 income of the head of household. Primary income for students who reported self or spouse as head of household was based on the student's income. Primary income for students who reported father or mother as head of household was based on the parents' income.

The primary income data in Table 15 indicated that curriculum students were from slightly higher income backgrounds than continuing education students. The majority of curriculum students (54 percent) had a primary income of under $30,000 while the majority of continuing education students (56 percent) had a primary income of less than $25,000.

Occupation of Head of Household

Occupations of the head of household listed on the questionnaire were collapsed into thirteen categories reflected by the 1980 U.S. census report. Three additional categories--homemaker, student/retired/unemployed and, other were included. There appeared to be no major differences in the occupations held by heads of households between students enrolled in the two program areas. When not considering the "other" category, both groups reported high proportions in the executive, administrative and precision/craft occupational categories.

Table 15 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by head of household, student's income, parent's income, primary income, and occupational category of head of household

Variable	Students	
	Curriculum	Continuing education
Head of household:		
Father	28.5	9.2
Mother	8.1	4.2
Self	34.8	46.2
Spouse	25.6	35.3
Other relative	1.3	2.3
Other person, not listed	1.7	2.8
Total	100.0	100.0
Student's income for 1987:		
$0-$4,999	20.8	18.9
$5,000-$7,499	7.5	6.7
$7,500-$9,999	6.4	4.9
$10,000-$14,999	12.2	11.6
$15,000-$19,999	10.2	9.5
$20,000-$24,999	9.1	9.6
$25,000-$29,999	7.5	9.4
$30,000-$39,999	10.4	12.0
$40,000-$49,999	6.4	7.7
$50,000-$59,999	4.9	4.7
$60,000-$69,999	1.9	1.8
$70,000-$79,999	1.0	1.0
$80,000-$89,999	0.4	0.7
$90,000-$99,999	0.2	0.4
$100,000 or more	1.1	1.1
Total	100.0	100.0
Parents' income for 1987:		
$0-$4,999	4.9	10.5
$5,000-$7,499	3.4	5.0
$7,500-$9,999	3.5	4.6
$10,000-$14,999	8.2	9.2
$15,000-$19,999	9.0	7.3
$20,000-$24,999	10.2	8.8
$25,000-$29,999	9.5	5.7
$30,000-$39,999	12.5	7.0
$40,000-$49,999	9.8	5.5
$50,000-$59,999	7.7	3.6
$60,000-$69,999	5.2	2.0
$70,000-$79,999	3.7	1.4
$80,000-$89,999	2.4	1.4
$90,000-$99,999	1.1	0.5
$100,000 or more	3.3	2.0
Parents not living	5.6	25.5
Total	100.0	100.0

Table 15 (continued)

Variable	Students	
	Curriculum	Continuing education
Primary income for 1987:		
$0-$4,999	4.9	13.0
$5,000-$7,499	3.4	5.8
$7,500-$9,999	4.2	4.4
$10,000-$14,999	10.6	10.6
$15,000-$19,999	11.2	10.5
$20,000-$24,999	11.8	11.2
$25,000-$29,999	10.1	10.8
$30,000-$39,999	14.8	13.5
$40,000-$49,999	10.4	9.1
$50,000-$59,999	7.8	5.1
$60,000-$69,999	4.2	2.2
$70,000-$79,999	2.4	1.1
$80,000-$89,999	1.4	0.9
$90,000-$99,999	0.5	0.5
$100,000 or more	2.3	1.3
Total	100.0	100.0
Occupational category of head of household:		
Executive, administration	15.9	11.5
Professional, specialty	9.6	7.6
Technicians, support	6.0	2.5
Sales	5.4	2.8
Administrative support	8.3	5.5
Private household	0.3	0.7
Protective service	2.1	2.4
Service	3.4	3.9
Farm, forest, fish	2.4	3.6
Precision, craft	11.7	12.1
Machine operator	5.8	4.1
Transportation	2.9	3.1
Handlers, laborers	2.3	1.9
Homemaker	1.3	4.1
Student, retired, unemployed	3.9	9.7
Other	18.7	24.5
Total	100.0	100.0

Employment Status

The majority of curriculum students (75 percent) and continuing education students (57 percent) were employed (Table 16). Slightly less than one half of students in both groups were employed full-time. More than two times as many continuing education students as curriculum students described themselves as homemaker, retiree, unemployed, or on active duty.

Hours Worked Per Week

When considering only wage earners the largest proportions of students in both groups worked 40 to 44 hours per week. The continuing education student (38 percent) was almost two times as likely not to be a wage earner than was the curriculum student.

Table 16 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by employment status and hours worked per week for wages

Variable	Students	
	Curriculum	Continuing education
Employment status:		
Employed full-time	48.2	46.6
Employed part-time	26.6	10.2
Full-time student	6.6	1.3
Homemaker	4.6	9.4
Retired	2.3	18.5
Unemployed,actively seeking employment	5.5	6.1
Unemployed, not seeking employment	5.0	5.6
Active duty, guard/selected reserve	1.2	2.3
Total	100.0	100.0
Hours worked per week for wages:		
Not a wage/salary earner	20.2	37.9
Under 5 hours	1.8	2.3
5-9 hours	2.6	2.3
10-19 hours	7.9	3.6
20-29 hours	13.7	4.7
30-39 hours	10.3	6.9
40-44 hours	30.4	28.0
45-49 hours	7.1	5.9
More than 49 hours	6.0	8.4
Total	100.0	100.0

Academic Characteristics

The academic characteristics of currently enrolled curriculum and continuing education students were measured by GED score, high school grade average, grade average at this college, prior enrollment in a four-year institution, and prior school setting. Data for these characteristics are reported in Table 17.

General Educational Development (GED) Score

The overwhelming majority of curriculum and continuing education students did not take the GED exam. Among the curriculum students who took the GED exams (11 percent), 96 percent obtained the passing score of 225 or better. Among the continuing education students who attempted the GED exams (six percent), 81 percent achieved a passing score or better.

High School Grade Average and Overall Grade Average at this College

The majority of curriculum and continuing education students reported maintaining an A or B grade average in high school. In terms of overall grade average at this college, 51 percent of the curriculum students reported a grade average of A or B. Over one third of all curriculum students indicated they didn't have a grade average or didn't know the grade average. Since continuing education programs are noncredit, grade averages for continuing education students are not relevant.

Prior Enrollment in a Four-Year Institution and Prior School Setting

Almost one quarter of all respondents in both student groups had been enrolled in a degree program at a four-year college or university before entering their respective community college. The largest proportions of curriculum (45 percent) and continuing education students (42 percent) reported the public school as their prior educational setting before enrolling in this college. The public school setting was described by the "kindergarten to high school" response. Thirty-one of the curriculum students and 27 percent of the continuing education students cited a two or four-year college as their prior educational setting. Overall, there were no major differences between curriculum and continuing education students within any of the response categories.

Table 17 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by GED score, high school grade average, grade average at this institution, prior enrollment in a four-year college/university, and prior school setting

Variable	Students	
	Curriculum	Continuing education
GED score:		
Did not take GED exam	88.7	93.6
Below 225	0.4	1.2
225-249	2.4	1.5
250-274	3.6	1.5
275-299	2.7	1.4
300 or above	2.2	0.8
Total	100.0	100.0
High school grade average:		
A	11.4	11.4
B	50.3	46.9
C	31.5	26.9
Below C	1.6	4.2
Completed GED	4.0	1.8
None of the above	1.2	8.8
Total	100.0	100.0
Grade average at this institution:		
Don't have one	16.8	65.4
Don't know	20.6	12.7
A	21.0	8.3
B	30.4	10.4
C	10.4	2.8
Below C	0.8	0.4
Total	100.0	100.0
Prior enrollment in a four-year college/university:		
Yes	23.6	24.4
No	76.4	75.6
Total	100.0	100.0
Prior school setting:		
Kindergarten to high school	44.7	42.4
Another community college	10.6	9.3
Two year private college	2.0	2.0
Public four-year college/university	12.9	12.1
Private four-year college/university	4.8	4.3
Vocational/trade school	5.0	7.2
Business/industry	7.4	6.3
Labor/professional association	1.9	1.5
Government agency	3.6	2.5
Community agency	0.6	0.9
Other	6.5	11.5
Total	100.0	100.0

Attendance Characteristics

Attendance characteristics were categorized into the following sections: (a) general attendance and enrollment characteristics; (b) goals and intentions; (c) sources of influence and information; (d) barriers; (e) subsistence and expenses; (f) reasons, influencing characteristics, and preferences for attending; and (g) evaluation characteristics related to attendance. These characteristics are found in Tables 18 to 30.

General Attendance and Enrollment Characteristics

General attendance and enrollment characteristics observed were program in which enrolled, time of attendance, preferred time of attendance, location of classes, courses this quarter, credit hours this quarter, clock hours per week, total quarter hours, total quarters enrolled, distance to class, trips to school, and choice of institution. Data related to general attendance and enrollment characteristics appear in Tables 18, 19, and 20.

Program in Which Enrolled. The respondents in this study showed a strong preference for career-related occupation-oriented programs. Among curriculum students the majority (58 percent) were enrolled in technical programs; an additional 16 percent were enrolled in vocational programs. The largest proportion of continuing education students (38 percent) was in the occupational education program. Approximately one fourth of the continuing education students were enrolled in the avocational program, with slightly under one fourth enrolled in the preparatory program.

Time of Attendance and Preferred Time of Attendance. Curriculum and continuing education students varied in relation to time of attendance and preferred time of attendance. The majority of curriculum students (56 percent) attended classes during the day. In contrast, 60 percent of the continuing education students attended classes in the evening. Less than one percent of all students actually attended classes on weekends. With regard to preferred time of attendance, curriculum students (53 percent) were more likely to prefer to attend classes in the morning, while continuing education students (54 percent) preferred evening classes.

Location of Classes. The data showed that curriculum and continuing education students differed with regard to the location of classes attended. Four out of five curriculum students attended classes on the main campus. This was not the trend for continuing education students. The largest proportion of these students attended at off-campus sites (41 percent) while slightly over one third attended on the main campus.

Table 18 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, time of attendance, time of preferred attendance, and location of classes

Variable	Students	
	Curriculum	Continuing education
Program:		
College transfer	18.9	
General education	7.4	
Technical education	57.6	
Vocational education	16.1	
Total	100.0	
Academic education		4.3
Avocational education		25.1
Preparatory education		23.7
Occupational education		38.3
Practical skills education		8.6
Total		100.0
Time of attendance:		
Mornings	46.9	27.4
Afternoons	8.8	12.4
Evenings	43.3	59.5
Weekends	1.0	0.7
Total	100.0	100.0
Time of preferred attendance:		
Mornings	53.3	31.5
Afternoons	11.4	13.3
Evenings	33.3	53.9
Weekends	2.0	1.3
Total	100.0	100.0
Location of classes:		
Main campus	80.9	35.6
Workplace	2.0	7.0
Branch campus	7.4	13.5
Other off-campus site (church, school, residence)	7.0	41.1
Equally divided between on-campus and off-campus locations	2.7	2.8
Total	100.0	100.0

Continuing education students (14 percent) were more likely than curriculum students (seven percent) to attend classes at the workplace.

Courses this Quarter, Credit Hours this Quarter, Clock Hours Per Week, and Total Quarter Hours. The majority of all students were enrolled in one or two courses during the fall of 1988 (Table 19). Continuing education students (84 percent) were approximately twice as likely to be enrolled in one course than were curriculum students (49 percent).

Over one half of the curriculum students (56 percent) reported part-time enrollment (one to eleven credit hours), whereas thirty-nine percent were enrolled for 12 or more credit hours. Credit is not given for continuing education programs, and likewise the overwhelming majority of continuing education students responded they were not taking courses for credit.

The largest proportions of all students were in class from one to five hours per week. Seventy-two percent of curriculum students attended class 15 or less hours per week. Continuing education students attended class fewer hours per week than did curriculum students. The majority of all students had been enrolled for 36 or fewer quarter hours.

Total Quarters Enrolled. The majority of curriculum and continuing education students were enrolled in their first or second quarter at their respective institutions (Table 20). Continuing education students were twice as likely to have been enrolled for nine or more quarters than curriculum students.

Distance to Class and Trips to School. The majority of curriculum students (57 percent) and continuing education students (72 percent) traveled ten or fewer miles to the location of their classes. The continuing education students (51 percent) were 1.5 times more likely than curriculum students (33 percent) to travel five or less miles to class.

Fifty-four percent of the curriculum students made four or more trips to class each week. In contrast, the overwhelming majority of continuing education students made one or two trips to class per week.

Choice of Institution. Curriculum students were almost twice as likely to attend another institution if their institution had not existed. Sixty-six percent of curriculum students indicated they would have attended another institution in contrast to 35 percent of continuing education students.

Table 19 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by courses this quarter, credit hours this quarter, clock hours per week, and total quarter hours at this institution

Variable	Students	
	Curriculum	Continuing education
Number of courses this quarter:		
1	43.6	83.9
2	18.4	11.7
3	14.4	2.0
4	13.2	1.6
5	7.4	0.6
6	2.4	0.2
7	0.5	0.0
8	0.1	0.0
9	0.0	0.0
Total	100.0	100.0
Credit hours this quarter:		
Not taking courses for credit	5.0	79.0
1-3 credit hours	19.2	7.9
4-7 credit hours	23.7	5.3
8-11 credit hours	13.3	1.3
12-15 credit hours	20.4	1.0
16-19 credit hours	11.9	0.4
20 or more credit hours	6.5	5.1
Total	100.0	100.0
Clock hours per week:		
1-5	32.5	55.8
6-10	23.3	24.4
11-12	5.8	4.8
13-15	9.9	2.2
16-20	12.1	2.8
21-25	7.0	1.7
26-30	5.1	2.1
More than 30	4.3	6.2
Total	100.0	100.0
Total quarter hours at this institution:		
Less than 10 hours	25.1	24.1
10-18	17.9	9.4
19-36	22.8	24.6
37-54	9.2	7.2
55-72	7.6	9.1
73-90	6.4	4.2
91-108	4.4	4.5
109-126	3.0	5.2
127-144	1.2	2.2
145-162	0.8	2.2
163-180	0.9	1.9
More than 180	0.7	5.4
Total	100.0	100.0

Table 20 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by total quarters enrolled, distance to class, trips to class, and would have attended another institution had this one not existed

Variable	Students	
	Curriculum	Continuing education
Total quarters enrolled at this institution:		
First quarter	40.3	42.4
2	10.3	11.6
3	9.3	7.2
4	9.6	6.4
5	8.7	3.2
6	3.8	3.8
7	3.2	1.9
8	3.2	2.3
9 or more	11.6	21.2
Total	100.0	100.0
Distance to class one way:		
0-3 miles	16.3	32.2
4-5 miles	16.7	19.0
6-10 miles	24.4	21.1
11-15 miles	15.6	13.9
16-20 miles	9.9	5.6
21-25 miles	6.6	3.5
26-30 miles	4.8	2.0
31-35 miles	2.6	1.2
36-50 miles	2.4	1.1
Over 50 miles	0.7	0.4
Total	100.0	100.0
Trips to class:		
1	14.2	48.5
2	23.9	30.5
3	8.1	3.9
4	9.6	4.9
5	34.5	9.2
6	3.3	0.8
7 or more	6.4	2.2
Total	100.0	100.0
Would have attended another institution had this one not existed:		
Yes	66.4	34.6
No	33.6	65.4
Total	100.0	100.0

Goals and Intentions

Community college students were asked to indicate their primary educational goals, primary graduation intentions, and the highest level of education they planned to obtain. Data for goals and intentions are reported in Table 21.

Primary Educational Goal, Primary Graduation Intention, and Highest Level of Education Intended. Primary educational goals varied for the students in the curriculum and continuing education program areas. Curriculum students were more interested in job preparation (55 percent) and transferring to a four-year institution (21 percent), whereas continuing education students (43 percent) were attending primarily for self-enrichment. One third of the continuing education students reported that their educational goals were related to jobs.

Continuing education students (68 percent) were almost three times as likely than curriculum students (24 percent) to complete selected courses with no intention to graduate. More than one half of curriculum respondents intended to earn either an associate degree in a career program (36 percent) or an associate degree in a college transfer program (17 percent). The majority of continuing education students were attending for the purpose of completing the present course or to obtain a high school diploma/GED (18 percent).

The majority of curriculum students (58 percent) were planning to continue their education beyond the community college degree. One quarter of the curriculum students reported the associate degree as the highest level of education they planned to obtain. The largest proportion of continuing education students reported "other" as the highest level of education planned, followed by completion of the high school diploma or GED (18 percent).

Sources of Influence and Information

Students were asked to indicate the sources of influence to attend and sources of information about programs or courses. Data for sources of influence and information appear in Table 22.

Source of Most Influence to Attend. The first and second sources that influenced the student's decision to attend his/her institution differed according to program area. Among curriculum students 40 percent cited a family member or friend, followed by 19 percent who cited institutional sources--recruiter, literature, radio, TV, and newspaper. The single most influential source for curriculum students (18 percent) was parents. Institutional sources of influence were cited by 33 percent of the continuing education students. Family and friends were the second source of influence

Table 21 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by primary educational goal, primary graduation intention, and highest level of education intended

Variable	Students	
	Curriculum	Continuing education
Primary education goal while at this college:		
Explore a new academic/career area	10.6	6.0
Prepare for a first job	14.7	4.8
Prepare for a different job	24.5	11.4
Update/improve skills for current job	15.5	17.8
Prepare for transfer to four year college	21.1	1.5
For self-enrichment	9.7	43.4
Cope with a major change in life	2.5	4.3
Improve basic skills	1.4	10.8
Total	100.0	100.0
Primary graduation intention while at this college:		
Complete selected courses, do not intend to graduate	23.8	68.0
Earn high school diploma/GED	1.6	17.9
Earn a diploma in a career program	13.5	2.7
Earn a certificate in a career program	8.3	6.0
Earn an associate degree in a career program	35.6	4.3
Earn an associate degree in a college transfer program	17.2	1.1
Total	100.0	100.0
Highest level of education you plan to obtain:		
High school diploma or GED	2.0	18.4
Vocational diploma	9.6	9.6
Technical degree	5.8	4.9
Associate degree	25.1	7.5
Bachelor's degree	28.3	10.2
Master's degree	16.0	8.9
Doctorate	3.6	2.3
Other	9.6	38.2
Total	100.0	100.0

Table 22 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by source of most influence to attend and source of first information about program

Variable	Students	
	Curriculum	Continuing education
Source of most influence to attend:		
Recruiter, other staff	6.8	14.7
Literature from this college	10.2	11.5
Radio, TV, newspaper	2.4	6.5
Employer	9.3	13.2
Personnel at a four-year college	1.7	0.9
High school personnel	5.1	1.5
Parent	18.0	5.8
Spouse	10.2	6.6
Child	1.9	2.2
Other relative	3.8	3.9
Current student at this college	4.6	3.6
Former student at this college	5.7	3.3
Friend, not a student here	6.2	5.6
Social service agency	1.3	5.1
Other, not listed here	12.8	15.6
Total	100.0	100.0
Source of first information about program:		
Recruiter, other staff	16.1	15.7
Literature from this college	29.4	17.6
Radio	0.3	0.7
TV	0.7	0.5
Newspaper	5.9	12.7
Employer	5.5	11.8
Personnel at a four-year college	1.6	1.2
High school personnel	7.5	1.7
Parent	3.6	2.0
Spouse	1.4	1.3
Child	0.3	0.8
Other relative	2.8	3.3
Current student at this college	4.6	4.3
Former student at this college	6.3	4.2
Friend, not a student here	3.5	5.6
Social service agency	1.0	4.6
Other, not listed here	9.5	12.0
Total	100.0	100.0

for 24 percent of continuing education students. Employers were the third source of influence for curriculum students (nine percent) and continuing education students (13 percent).

Source of Information About Program or Course. Institutional sources--recruiter, literature, and media served as the first source of information about the program for the majority of curriculum students (52 percent) and continuing education students (47 percent). Among the institutional sources, the largest proportions of curriculum and continuing education students reported literature from the college as the first source of information, followed by college personnel. Continuing education students (13 percent) were twice as likely to cite newspaper as a source of information, as compared to curriculum students (six percent). Family and friends (12 percent) were cited as the second source of information for curriculum students and 13 percent for continuing education students. High school personnel provided a third source of information for curriculum students (eight percent) compared to employers for continuing education students (12 percent).

Community college curriculum students received their information about programs from college literature and personnel but family members and friends influenced them to attend. For continuing education students the same sources are used for information and influence.

Barriers

Community college students were asked to identify the major reasons that prevent others from attending this college. The data are found in Table 23.

Major Barriers Perceived as Preventing Others from Attending. The respondents were instructed to select five major reasons that make it difficult for people like you to attend this college. The findings revealed that curriculum and continuing education students perceived barriers to education similarly. The curriculum students cited the following five barriers: (1) not enough time--17 percent; (2) do not enjoy studying--12 percent; (3) lack of energy and stamina--six percent; (4) do not want to come full-time--five percent; and (5) unsure of program to pursue--five percent. The continuing education students cited the following five barriers: (1) not enough time--17 percent; (2) do not want to come full-time--eight percent; (3) lack of energy and stamina--eight percent; (4) do not enjoy studying--seven percent; and (5) feel too old to go back to school--four percent.

Table 23 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by major reasons preventing others from attending

Variable	Students	
	Curriculum	Continuing education
Five major reasons that you feel prevent others from attending this college:		
Cost	0.4	0.7
Job responsibilities	1.0	1.1
No child care	0.2	0.2
No transportation	0.1	0.5
Friends or family not supportive	0.1	0.1
Time required to complete program	0.6	0.5
Courses not at convenient times	1.2	0.6
Home responsibilities	4.2	3.2
Too far to travel	2.4	2.1
Negative image of vocational occupations	0.3	0.0
Attendance requirements	1.6	0.7
Not enough information on programs	1.1	0.6
Desired courses are not offered	4.3	2.5
"Red tape" in enrollment	1.4	1.6
Feel too old to go back to school	2.0	4.2
Low grades in past, not confident	3.8	4.1
Unsure of program to pursue	4.7	3.2
Not enough time	17.4	17.2
Do not want to come full-time	5.1	8.2
Lack of energy and stamina	6.1	7.9
Do not enjoy studying	12.0	6.9
College not sensitive	1.1	1.7
Race relations climate	0.9	0.7
Required testing for admission	4.1	3.3
Other, not listed	23.9	28.2
Total	100.0	100.0

Subsistence and Expenses

Subsistence and expenses were measured by the following variables: sources of income, sources of financial aid, amount of financial aid, book and supply expenses, child care expenses, number of dependents, and employment plans. Data related to income, sources and amount of financial assistance, educational and child care expenses are found in Table 24. The number of dependents are in Table 25 and employment plans are reported in Table 26.

Major and Minor Sources of Income. Respondents were instructed to indicate all major and minor sources of income which applied to them. Due to the nature of multiple responses, the findings reflect a percentage of total responses made, not total individuals. Therefore, 100 percent of the responses made can only be accounted for as both major and minor sources of income are summed.

Full-time employment as a major source of income was indicated by responses made by curriculum students (13 percent) and continuing education students (16 percent). The second major source of income for curriculum students (12 percent) was spouse, compared to retirement (15 percent) and spouse (13 percent) for continuing education students. Curriculum students responded that savings (13 percent) and parents (11 percent) were minor sources of income. The spouse (eight percent) and part-time employment (seven percent) were minor sources of income based on the responses of continuing education students.

Sources and Amount of Financial Aid. Twenty-five percent of the curriculum students responded that they received some type of financial aid. Employer tuition assistance, Pell Grant, and Veterans Administrations educational benefits were the major sources of financial aid.

Of the 23 percent of curriculum students who responded to the question requesting the amount of financial aid, the largest proportion (59 percent) received financial aid of $1,000 or less. Three fourths of all curriculum and continuing education students reported they received no financial aid.

Book and Supply Expenses. Continuing education students were more likely to have a lower cost for books and supplies than were curriculum students. Among curriculum students, over one half had no expense or less than $100 in book and supply expenses. Eighty-five percent of the continuing education students had no expense or less than $50 in expenses.

Table 24 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by major sources of income, minor sources of income, sources of financial aid, amount of financial aid, educational expenses, and child care expenses

Variable	Students	
	Curriculum	Continuing education
Major source of income:		
Full-time employment	12.5	16.1
Part-time employment	1.7	1.1
Parent(s)/guardian(s)	6.0	1.7
Spouse	12.1	12.8
Other relative(s)	0.3	0.2
Savings	1.5	0.5
Retirement	2.9	14.5
Public assistance	0.4	2.4
Financial Aid	1.6	0.1
Other sources	2.2	2.6
Minor source of income:		
Full-time employment	0.1	1.1
Part-time employment	5.4	7.2
Parent(s)/guardian(s)	11.1	2.1
Spouse	7.8	8.2
Other relative(s)	1.5	0.8
Savings	12.5	6.3
Retirement	2.2	4.9
Public assistance	0.4	1.3
Financial aid	5.1	0.5
Other sources	12.6	15.3
Total	100.0	100.0
Sources of financial aid:		
Not receiving financial aid	75.1	
JTPA	1.5	
Pell Grant	5.8	
SEOG	0.4	
Educational loan	1.1	
Scholarship	3.3	
V.A. educational benefits	3.9	
NC student incentive grant	0.4	
College work-study program	1.0	
Vocational rehabilitation	1.1	
Employer tuition assistance	6.4	
Total	100.0	

Table 24 (continued)

Variable	Students	
	Curriculum	Continuing education
Current amount of financial aid:		
Not receiving financial aid	76.9	
Under $200	4.3	
$200-$399	3.8	
$400-$699	3.4	
$700-$999	2.1	
$1,000-$1,499	4.3	
$1,500-$1,999	1.6	
$2,000-$2,499	1.0	
$2,500-$2,999	0.7	
$3,000-$3,999	0.7	
$4,000 or more	1.2	
Total	100.0	
Book and supply expenses this quarter:		
No expense	10.2	44.6
Under $50	25.1	40.4
$50-$99	24.6	9.2
$100-$149	18.5	2.8
$150-$199	10.9	1.5
$200-$249	5.7	0.5
$250-$299	2.2	0.4
$300-$499	2.0	0.2
$500 or more	0.8	0.4
Total	100.0	100.0
Pay for child care in order to attend:		
No--		
I do not need child care	83.9	87.6
Child care expenses paid by another source	1.7	1.5
Child care provided at no expense	6.3	7.7
Yes--		
Less than $50 per month	3.0	2.0
$50-$99 per month	1.8	0.4
$100-$149 per month	1.4	0.2
$150-$199 per month	0.9	0.2
$200-$$249 per month	0.6	0.2
$250 or more per month	0.4	0.2
Total	100.0	100.0

Table 25 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by number and age of dependents

	Curriculum students				
	Number of dependents				
Variable	1	2	3	4	5
Age of dependents:					
Under 5 years	12.5	3.2	1.0	0.5	0.2
5-9 years	10.1	3.6	0.4	0.1	0.1
10-14 years	11.0	3.4	0.3	0.1	0.1
15-19 years	14.3	4.2	0.4	0.1	0.0
20-24 years	6.8	1.1	0.1	0.0	0.0
25 and older	21.0	4.6	0.4	0.0	0.4
Total	75.7	20.1	2.6	0.8	0.8
		Total = 100.0			

	Continuing education students				
	Number of dependents				
Variable	1	2	3	4	5
Age of dependents:					
Under 5 years	9.7	3.6	0.8	0.2	0.6
5-9 years	7.0	2.2	0.4	0.1	0.2
10-14 years	8.7	3.2	0.6	0.1	0.4
15-19 years	14.8	3.9	0.4	0.1	0.4
20-24 years	6.8	1.0	0.1	0.0	0.2
25 and older	26.1	7.2	0.4	0.2	0.6
Total	73.1	21.1	2.7	0.7	2.4
		Total = 100.0			

Child Care Expenses. The overwhelming majority of curriculum students (92 percent) and continuing education students (97 percent) responded they did not need or pay for child care in order to attend this college. Of the students who paid for child care, five percent of the curriculum enrollment paid less than $100 a month, compared to two percent of the continuing education students.

Number of Dependents. Respondents were instructed to mark the number of dependents in each age group who depended upon the respondent for more than half of their financial support. Due to the nature of the multiple responses, the findings reflect a percentage of total responses made, not total individuals. Almost three quarters of the total responses made by students in both groups indicated one dependent in one or more of all age groups (Table 25). Two dependents in one or more of all age groups were cited by one fifth of the total responses made by students in both groups.

Employment Plans. A majority of all the respondents planned to work in North Carolina. Among curriculum students, 77 percent planned to work in the area the college serves or someplace in North Carolina, as compared to 52 percent of the continuing education students (Table 26). Continuing education students were three times more likely to seek military service, keeping house, retirement, or other.

Table 26 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by employment plans after course of study

Variable	Students	
	Curriculum	Continuing education
Employment plans after course of study:		
Work in the area that the college serves	28.7	25.4
Probably or definitely work in NC	48.6	26.2
Work in another state	10.3	3.5
Military service	1.7	3.0
Keeping house	0.7	5.8
Retirement	1.7	17.2
Other	8.3	18.9
Total	100.0	100.0

Reasons, Influencing Characteristics, and Preferences for Attending
This section presents the following attendance characteristics: reasons for continuing their education, institutional characteristics influencing decision to attend, and preference of institution to attend. The data are presented in Table 27.

Reasons for Continuing Their Education. The respondents were instructed to rank order the five most important reasons for continuing their education from a list of 12 responses. Curriculum and continuing education students selected the same five reasons, although each group ordered them differently. Curriculum students ranked the following reasons in first to fifth order: (1) to earn more money; (2) to get a better job; (3) to learn more things of interest; (4) to contribute more to society; and (5) to gain a general education. Continuing education students ranked the following reasons in first to fifth order: (1) to learn more things of interest; (2) to earn more money; (3) to contribute to society; (4) to get a better job; and (5) to gain a general education.

Both groups agreed on three of the four least important reasons for continuing their education. These were: to improve basic skills, pressure from parents or spouse, and there was nothing better to do.

Institutional Characteristics Influencing Decision to Attend. Respondents were instructed to choose the five things about their respective community college which influenced their decision to attend. Student rankings of institutional characteristics that most influenced their decision showed no differences between curriculum and continuing education students. Both groups reported the following five influencing factors: (1) educational programs or courses available; (2) location of classes; (3) low cost; (4) convenient class schedule; and (5) quality of instruction.

The two groups were also similar when reporting the least important institutional characteristics. Child care, academic ineligibility, and job placement were ranked low among institutional characteristics by both groups.

Preference of Institution to Attend. Students were instructed to choose three out of seven educational institutions, in order of preference, assuming one could attend any of the institutions. Both groups cited their first preference of institution to attend was the community college they were currently attending. Curriculum students ranked a public four- year college and a private four-year college as the second and third choices respectively. Among continuing education students, the second choice was another community college, while the third choice was a public four-year college.

Table 27 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by rank order and raw score of reasons for continuing their education, institutional characteristics influencing decision to attend, and preference of institution

Variable	Students: Curriculum Rank	Curriculum Raw score*	Continuing education Rank	Continuing education Raw score
Reason for continuing their education:				
Contribute more to society	4	187.3	3	106.5
Earn more money	1	449.5	2	137.5
Become more cultured	7	121.1	7	78.9
Gain general education	5	175.6	5	94.2
Get better job	2	382.6	4	102.2
Improve basic skills	10	72.5	9	56.6
Improve social life	11	72.3	8	65.9
Learn things of interest	3	232.7	1	176.7
Meet interesting people	8	86.2	6	93.0
Parents/spouse wanted me to	9	74.1	12	28.5
Nothing better to do	12	31.5	11	28.8
Tired of what doing	6	121.6	10	56.4
Institutional characteristics influencing decision to attend:				
Programs available	1	378.5	1	185.4
Financial assistance available	8	87.2	11	17.8
Job placement services	10	75.7	10	25.4
Location	2	358.4	2	183.9
Low cost	3	302.2	3	130.1
Open-door admissions	7	116.4	7	54.6
Quality of instruction	5	155.3	5	109.4
Student-centered instruction	11	43.0	9	31.3
College's reputation	6	138.7	8	53.9
Academically unable to attend elsewhere	12	40.1	12	16.7
Convenient class schedule	4	174.2	4	121.7
Child care available	13	14.2	13	9.7
Other reasons	9	77.4	6	58.2
Preference of institution:				
This community college	1	243.6	1	152.9
Another community college	4	86.1	2	58.6
Private 2-year college	6	49.3	7	19.7
Private trade school	5	50.5	5	34.3
Public 4-year college	2	179.7	3	48.1
Private 4-year college	3	99.7	6	26.4
Another school	7	37.2	4	35.2

*Raw score is the expanded frequency multiplied by the converted rank value. For example, when an individual ranked a response as their first choice, it was multiplied by five. The second choice was multiplied by four, the third by three and so on up to the fifth choice. The raw scores are reported in terms of 1000 and reflect normal rounding procedure. The preference of institution ranking is based on converted rank values of 3, 2, and 1.

Evaluation Characteristics Related to Attendance

This section presents the following evaluation characteristics related to attendance: comfort level, recommendation of this college to a friend, and evaluation of the institution's services and facilities. The evaluation data are found in Tables 28, 29, and 30.

Comfort Level. Students were asked to indicate how comfortable they were with ten situations or items on their community college campus. The overwhelming majority of all students (over 91 percent) were comfortable to very comfortable with eight of the ten situations or circumstances listed (Table 28). Among curriculum students 16 percent responded they were not comfortable or very uncomfortable with talking with counselors, compared to 11 percent of the continuing education students. Thirteen percent of the curriculum students cited lack of comfort in talking with instructors.

Recommend This College to a Friend. Virtually all North Carolina community college students would recommend the college in which they were enrolled to a friend. Ninety-nine percent of all curriculum students and 98 percent of all continuing education students responded they would recommend their college to others (Table 28, last variable). Curriculum students (12 percent) were almost twice as likely than continuing education students (six percent) to recommend this college with reservations.

Evaluation of the Institution's Services and Facilities. Respondents were instructed to rate 28 services and facilities at their respective colleges according to the following dimensions: (1) not aware service/facilities existed, (2) didn't use service, (3) used, but dissatisfied with service, or (4) used, and satisfied with service. Table 29 describes the evaluation data for curriculum students, and Table 30 describes the data for continuing education students.

The largest proportions of curriculum students were satisfied with the quality of education (83 percent) and the college's overall image (86 percent). In addition, most curriculum students responded they were satisfied with the following: classrooms, shops and labs; the library; parking; student center and lounge area. In 19 of the 28 services and facilities listed, the majority of curriculum students reported they didn't use the service or facility.

Seventy-seven percent of the continuing education students cited they were satisfied with the quality of instruction, while 72 percent were satisfied with the college's overall image. The majority of continuing education students responded they were also satisfied with the classrooms, shops, labs, and parking. In 24 of the 28 services and

Table 28 Estimated percentage distribution of curriculum and continuing education students enrolled in the North Carolina Community College System, Fall 1988, by level of comfort with college items/situations and recommend this college to a friend

Variable	Students	
	Curriculum	Continuing education
How comfortable with the following items/situations:		
Race relations climate		
Very uncomfortable	4.8	6.7
Not comfortable	2.5	1.1
Comfortable	50.0	38.0
Very comfortable	42.7	54.2
Total	100.0	100.0
Presence of other people like me		
Very uncomfortable	4.5	5.6
Not comfortable	3.9	1.8
Comfortable	47.7	35.4
Very comfortable	43.9	57.2
Total	100.0	100.0
Black presence		
Very uncomfortable	4.3	5.6
Not comfortable	3.7	2.0
Comfortable	53.8	42.8
Very comfortable	38.2	49.6
Total	100.0	100.0
Talking with counselors		
Very uncomfortable	4.6	5.9
Not comfortable	11.5	5.5
Comfortable	56.2	45.1
Very comfortable	27.7	43.5
Total	100.0	100.0
Talking with instructors		
Very uncomfortable	4.7	5.2
Not comfortable	8.3	2.8
Comfortable	50.8	36.3
Very comfortable	36.2	55.7
Total	100.0	100.0

Table 28 (continued)

Variable	Students: Curriculum	Students: Continuing education
How comfortable with the following items/situations:		
Age of students in classes		
Very uncomfortable	3.7	5.0
Not comfortable	3.0	1.7
Comfortable	54.7	37.2
Very comfortable	38.6	56.1
Total	100.0	100.0
Sex of students in classes		
Very uncomfortable	4.5	5.3
Not comfortable	1.5	1.3
Comfortable	51.4	38.5
Very comfortable	42.6	54.9
Total	100.0	100.0
Academic ability of students in classes		
Very uncomfortable	3.4	4.7
Not comfortable	5.6	3.1
Comfortable	61.0	45.3
Very comfortable	30.0	46.9
Total	100.0	100.0
Occupational status of students in classes		
Very uncomfortable	3.4	4.7
Not comfortable	2.3	1.2
Comfortable	62.2	44.8
Very comfortable	32.1	49.3
Total	100.0	100.0
Social status of students in classes		
Very uncomfortable	3.4	4.9
Not comfortable	2.7	2.0
Comfortable	61.6	43.5
Very comfortable	32.3	49.6
Total	100.0	100.0
Recommend this college to a friend:		
Yes	87.1	92.1
Yes, with reservations	11.5	6.3
No	1.4	1.6
Total	100.0	100.0

Table 29 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by quality of services and facilities at this college

Variable	Not aware existed	Didn't use	Used dissatisfied	Used satisfied
Quality of services and facilities at this college:				
Academic counseling	6.1	44.4	6.7	42.8
Classrooms, shops, labs	2.2	9.6	6.2	82.0
Child care	30.2	67.1	0.6	2.1
Clubs, student organizations	10.3	75.1	2.9	11.7
Cooperative education program	15.1	62.0	2.6	20.3
Eating facilities	4.2	34.1	14.4	47.3
Financial aid to pay tuition	5.8	72.6	3.4	18.2
Financial aid to live on	14.5	76.5	2.6	6.4
Health care	24.4	70.5	1.1	4.0
Job counseling	11.7	75.6	2.7	10.0
Job placement service	10.2	78.9	2.8	8.1
Library	1.9	30.3	4.5	63.3
Math skills program	8.1	62.6	4.0	25.3
Transportation	27.3	63.1	1.5	8.2
Parking	1.4	7.9	30.1	60.6
Personal counseling	8.5	60.3	4.4	26.8
Reading skills program	8.6	74.8	2.3	14.3
Recreation facilities	12.3	66.1	3.5	18.1
Student center, lounge area	3.7	32.6	8.9	54.8
Study skills program	11.7	69.7	2.1	16.5
Test anxiety workshops	27.7	64.7	1.5	6.1
Time management workshops	28.0	65.3	1.3	5.4
Tools and equipment	11.5	54.3	4.2	30.0
Tutoring services	12.0	76.2	2.1	9.7
Campus security	12.1	49.9	6.6	31.4
Quality of instruction	2.0	8.2	6.7	83.1
College's overall image	2.3	6.7	5.4	85.6
Study and reading areas	4.8	36.1	5.7	53.4

Table 30 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by quality of services and facilities at this college

Variable	Not aware existed	Didn't use	Used dissatisfied	Used satisfied
Quality of services and facilities at this college:				
Academic counseling	15.6	62.0	2.4	20.0
Classrooms, shops, labs	7.2	21.7	5.2	65.9
Child care	27.0	70.3	0.7	2.0
Clubs, student organizations	20.1	74.5	1.3	4.1
Cooperative education program	18.6	59.9	2.1	19.4
Eating facilities	11.5	52.6	5.9	30.0
Financial aid to pay tuition	15.8	78.2	1.4	4.6
Financial aid to live on	18.5	78.1	1.2	2.2
Health care	21.8	72.2	1.1	4.9
Job counseling	14.8	76.1	1.7	7.4
Job placement service	15.7	77.1	1.5	5.7
Library	9.2	63.9	2.5	24.4
Math skills program	12.0	68.8	2.0	17.2
Transportation	23.0	68.0	1.5	7.5
Parking	6.5	26.4	13.1	54.0
Personal counseling	13.0	69.5	2.0	15.5
Reading skills program	9.1	70.1	2.4	18.4
Recreation facilities	15.4	72.7	2.1	9.8
Student center, lounge area	10.1	55.0	4.8	30.1
Study skills program	13.4	70.8	1.6	14.2
Test anxiety workshops	23.1	71.3	1.7	3.9
Time management workshops	23.3	70.5	1.3	4.9
Tools and equipment	14.3	54.9	4.9	25.9
Tutoring services	17.9	72.6	1.4	8.1
Campus security	15.6	57.4	3.4	23.6
Quality of instruction	4.5	13.5	5.3	76.7
College's overall image	5.9	18.9	3.6	71.6
Study and reading areas	10.1	55.0	3.1	31.8

facilities listed, most continuing education students stated they didn't use the service or the facility.

Highlights of Profiles of Curriculum and Continuing Education Students

Sex: The majority of curriculum (62 percent) and continuing education students (65 percent) were female.

Race: Black students comprised 17 percent of the curriculum enrollments and 21 percent of the continuing education enrollment. Four out of five curriculum students were white, whereas three out of four continuing education students were white.

Age: Curriculum students tended to be much younger than continuing education students. More than one half of curriculum students were under 30 years of age, although more than one half of continuing education students were over 30 years of age.

Marital Status: Higher proportions of curriculum students tended to be single, whereas more continuing education students were married.

Level of Education: Ninety-six percent of curriculum students compared to 61 percent of continuing education students had a high school diploma or a postsecondary level of education.

Employment Status: The majority of curriculum (75 percent) and continuing education students (57 percent) were employed either full or part-time.

High School Grade Average: The majority of curriculum (82 percent) and continuing education students (74 percent) reported earning a B or C grade average in high school. Eleven percent of all students in both program areas were A students in high school.

Program in Which Enrolled: Respondents showed a strong preference for occupation-oriented programs. Seventy-four percent of all curriculum students were enrolled in technical or vocational programs, and the largest proportion of continuing education students (38 percent) were in the occupational education program.

Time of Attendance: The majority of curriculum students (56 percent) attended classes during the day; 60 percent of continuing education students attended classes in the evening.

Credit Hours this Quarter: The majority of all students were enrolled part-time taking less than 12 credit hours. Only 39 percent of the curriculum students were enrolled for 12 or more credit hours.

Distance to Class: The majority of curriculum students (57 percent) and continuing education students (72 percent) traveled ten or fewer miles to the location of their classes.

Choice of Institution: Curriculum students are almost twice as likely to attend another institution as are continuing education students.

Primary Educational Goal: Curriculum students were more interested in job preparation (55 percent) and transferring to a four-year institution (21 percent), whereas continuing education students (43 percent) were attending primarily for self-enrichment.

Sources of Influence and Information: Curriculum students tended to receive information on programs from institutional sources--recruiter, literature, and media, whereas family and friends tended to have more influence on their decisions to attend. Continuing education students received information and are influenced to attend primarily from institutional sources.

Reasons for Continuing Their Education: The foremost reason given by curriculum students for continuing their education was to earn more money, although for continuing education students it was to learn more things of interest.

Institutional Characteristics Influencing Decision to Attend: Curriculum and continuing education students reported the same rankings on institutional characteristics that influenced their decision to attend. They were: (a) programs, (b) class location, (c) low cost, (d) convenient class schedule, and (e) quality of instruction.

Comfort Level: Students were very comfortable with their community college experience and they would recommend the college to a friend.

Evaluation of Institution's Services and Facilities: Curriculum and continuing education students reported they were quite satisfied with the institution's services and facilities.

Chapter 7
Profiles of Curriculum Students Within Program Areas

This chapter presents indepth student profiles on curriculum students enrolled in the fall of 1988. The specific curriculum programs areas are: college transfer, general, technical, and vocational education. The student profiles are described in terms of selected demographic, socioeconomic, academic, and attendance characteristics. Highlights of curriculum student profiles are presented at the end of the chapter.

Demographic Characteristics

The demographic characteristics selected to describe curriculum students were: sex, race, age, marital status, and veteran status. These data are presented in Table 31.

Sex

Female students are in the majority in all program areas except for vocational education. Within the college transfer area, the male to female distribution is very similar to the proportion of all males to all females in the study. The largest proportion of females was in technical education (69 percent), while the largest proportion of males was in the vocational programs (61 percent).

Race

Racial groups were unequally distributed within specific curriculum program areas. Minority groups made up 15 percent of the college transfer group, 22 percent of general education, 20 percent of the technical education group, and 27 percent of the vocational education student group. The college transfer curriculum was less attractive to minority students than general, technical, or vocational programs. The majority of blacks were enrolled in vocational programs (24 percent), whereas only 12 and 11 percent respectively, were enrolled in college transfer and general education programs.

Age

The data in Table 31 indicate that students enrolled in the college transfer program were much younger than students in other curriculum program areas. Their average age was 25. Fifty-eight percent of the college transfer students were 22 years of age or younger compared to 34 percent of the technical and vocational students. The average ages for general education, technical, and vocational students were 33, 30, and 30 years respectively. More than 50 percent of students in all program areas were under 30 years of age, and the average age of all curriculum students was 29.

Table 31 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, sex, race, age, marital status, and veteran status

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Sex:				
Male	38.3	41.7	30.9	61.2
Female	61.7	58.3	69.1	38.8
Total	100.0	100.0	100.0	100.0
Race:				
American Indian	0.4	1.4	1.5	1.5
Asian	1.4	6.7	0.6	0.6
Black	11.9	10.8	16.6	24.1
Hispanic origin	0.7	2.8	0.7	0.5
White	84.5	77.9	80.3	73.1
Other	1.1	0.4	0.3	0.2
Total	100.0	100.0	100.0	100.0
Age:				
22 and younger	57.6	38.6	34.4	33.9
23-29 years	19.0	15.8	24.1	22.2
30-39 years	13.2	18.8	23.6	24.9
40-49 years	7.0	11.5	12.3	12.9
50-59 years	2.0	3.1	4.0	4.0
60-69 years	1.0	9.7	1.1	1.7
70-79 years	0.2	2.5	0.5	0.4
80 and older	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Marital status:				
Single, never married	63.7	46.6	44.1	45.8
Married, not separated	28.7	44.2	43.3	41.5
Separated	2.4	1.7	3.6	3.7
Widowed	0.9	3.7	1.1	1.5
Divorced	4.3	3.8	7.9	7.5
Total	100.0	100.0	100.0	100.0
Veteran status:				
Yes	8.2	11.0	9.5	16.9
No	91.8	89.0	90.5	83.1
	100.0	100.0	100.0	100.0

Marital Status

The largest proportions of all curriculum students were single. Within the four curriculum program areas, the largest proportion of single curriculum students (64 percent) was in the college transfer program. In the general, technical, and vocational programs there were small differences between the proportions of single students and married students.

Veteran Status

More than 80 percent of all students in curriculum programs were not veterans. The highest proportion of veterans was enrolled in vocational programs (17 percent), while the lowest proportion was enrolled in college transfer programs (eight percent).

Socioeconomic Characteristics

The socioeconomic characteristics of curriculum students were: student's education, father's and mother's education, student's income, parents' income, head of household, occupation of head of household, and student's employment status. These characteristics are presented in Tables 32 and 33.

Education--Student and Parents

The majority of the students in all curriculum program areas had at least a high school level of education. Thirty-nine percent of the college transfer students had a high school education compared to 31 percent, 42 percent, and 53 percent respectively for students enrolled in general, technical, and vocational education. Twenty-two percent of the general education students were college graduates, while 10 percent of the technical education students were college graduates. Ten percent of the vocational education students had less than a high school level of education.

More than one half of all curriculum students' parents had a high school level of education or less. Parents of students enrolled in general education had the highest levels of education followed by students enrolled in college transfer, technical, and vocational education programs. The father's level of education tended to be lower than the mother's when considering the high school level or less. However, more fathers than mothers had a college education. Forty-five percent of the fathers of vocational students had less than a high school level of education.

Table 32 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, student's education, father's education, and mother's education

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Student's education:				
8th grade or less	0.0	1.6	0.2	1.5
9th - 11th grade	3.6	6.1	1.4	8.6
High school	35.7	26.9	36.3	41.4
GED diploma	3.4	4.1	5.6	11.9
One year beyond high school	26.0	18.6	22.2	15.0
Diploma program	4.1	4.7	3.8	6.5
Two years of college	13.3	9.3	11.2	6.2
Associate degree	5.5	2.9	5.2	3.1
Three years of college	3.7	3.9	4.6	1.5
College graduate	3.4	17.0	6.9	2.9
Graduate work	1.3	4.9	2.6	1.4
Total	100.0	100.0	100.0	100.0
Father's education:				
8th grade or less	12.4	14.7	20.2	28.8
9th - 11th grade	11.9	10.8	15.5	16.4
High school	28.8	24.0	31.0	29.3
GED diploma	4.0	4.9	3.1	2.2
One year beyond high school	7.0	4.8	5.0	5.1
Diploma program	1.7	1.2	1.4	1.6
Two years of college	8.0	9.3	5.6	4.5
Associate degree	3.0	3.5	3.1	1.9
Three years of college	1.6	2.3	1.4	0.7
College graduate	14.9	17.6	9.4	7.3
Graduate work	6.7	6.9	4.3	2.2
Total	100.0	100.0	100.0	100.0
Mother's education:				
8th grade or less	8.5	13.2	12.1	18.2
9th - 11th grade	11.2	11.9	15.5	18.1
High school	35.7	27.3	37.5	36.1
GED diploma	4.6	4.0	3.9	4.2
One year beyond high school	8.5	5.6	6.6	4.5
Diploma program	2.4	2.6	3.0	2.9
Two years of college	8.3	13.5	6.1	5.4
Associate degree	3.1	5.8	3.1	2.4
Three years of college	1.9	1.1	1.6	1.3
College graduate	10.5	11.9	7.9	5.0
Graduate work	5.3	3.1	2.7	1.9
Total	100.0	100.0	100.0	100.0

Income--Student and Parents

Between 18 and 28 percent of all curriculum students reported income in 1987 of less than $5,000 (Table 33). The students in the college transfer program had the lowest level of income, while those in general education had the highest levels of income.

Fifty percent of the parents of vocational students had incomes less than $25,000 compared to 29 percent for parents of college transfer students. More than 50 percent of all parents of curriculum students had incomes less than $40,000. Twenty-four percent of all parents of curriculum students had incomes of $50,000 and above.

Head of Household

Slightly more than one half of all college transfer students reported that their parents were head of household compared to one third of the general, technical, and vocational education students. More than 46 percent of all curriculum students in all program areas reported themselves or their spouses as the head of household.

Occupation Head of Household

The distribution of curriculum students by program areas and occupations of heads of households differed to some degree. Approximately one third of college transfer and general education students reported that their household head's occupation was in the executive/administration/professional/specialty categories. In contrast, almost one third of the vocational students reported precision/craft and machine operator occupations for their head of households. Technical education students were more like college transfer and general education students than vocational students. A higher proportion of vocational students appeared to come from blue-collar backgrounds, whereas higher proportions of college transfer, general, and technical education students were more likely to come from white-collar backgrounds.

Student's Employment Status

According to the data in Table 33, more than two thirds of all curriculum students were employed either full or part-time. Full-time employment was greatest among technical and vocational education students, 52 percent and 51 percent respectively, while least among college transfer students (38 percent). Thirty-seven percent of the college transfer students reported part-time employment.

Table 33 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, student's income, parents' income, head of household, occupational category of head of household, and student's employment status

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Student's 1987 income:				
$0-$4,999	27.9	20.6	18.2	22.7
$5,000-$7,499	10.3	7.7	7.0	6.2
$7,500-$9,999	6.8	7.1	6.3	5.9
$10,000-$14,999	11.5	8.4	12.4	13.8
$15,000-$19,999	9.4	10.2	10.6	9.5
$20,000-$24,999	7.5	5.8	9.2	11.7
$25,000-$29,999	5.4	7.8	7.8	8.2
$30,000-$39,999	9.8	3.8	11.4	10.7
$40,000-$49,999	4.1	7.5	7.5	4.3
$50,000-$59,999	3.4	13.0	4.6	3.9
$60,000-$69,999	1.0	2.7	2.5	0.7
$70,000 or more	2.9	5.4	2.5	2.4
Total	100.0	100.0	100.0	100.0
Parent's 1987 income:				
$0-$4,999	3.0	7.6	4.3	8.5
$5,000-$7,499	2.2	5.2	3.4	4.2
$7,500-$9,999	2.9	2.4	3.5	5.0
$10,000-$14,999	5.8	7.4	8.5	11.1
$15,000-$19,999	6.2	5.3	10.2	10.5
$20,000-$24,999	8.8	7.2	11.1	10.1
$25,000-$29,999	10.7	11.4	9.4	7.4
$30,000-$39,999	15.6	11.5	12.1	10.3
$40,000-$49,999	11.0	8.1	10.2	7.6
$50,000-$59,999	8.6	6.8	7.8	6.4
$60,000-$69,999	8.1	5.5	4.7	2.5
$70,000 or more	12.9	10.5	9.6	10.3
Parents no longer living	4.2	11.1	5.2	6.1
Total	100.0	100.0	100.0	100.0
Head of household:				
Father	41.6	27.0	25.3	25.4
Mother	9.4	7.0	7.3	10.2
Yourself	26.8	34.7	34.0	46.7
Spouse	19.2	27.4	30.3	15.6
Other relative	2.0	1.1	1.2	0.6
Other person	1.0	2.8	1.9	1.5
Total	100.0	100.0	100.0	100.0

Table 33 (continued)

Variable	Curriculum students: College transfer	General education	Technical education	Vocational education
Occupational category of head of household:				
Executive, administration	20.3	16.0	16.1	9.4
Professional, specialty	12.3	16.0	9.1	5.3
Technician, support	6.1	6.4	6.4	4.2
Sales	7.1	9.7	5.1	2.5
Administrative support	7.1	8.2	9.6	5.2
Private household	0.2	0.1	0.2	0.8
Protective service	1.5	1.3	2.7	1.2
Service	2.8	3.3	3.3	4.6
Farm, forest, fish	3.0	1.6	2.1	2.8
Precision, craft	7.6	6.7	10.9	21.7
Machine operator	4.2	8.1	5.2	8.8
Transportation	3.0	1.1	2.8	3.7
Handlers, laborers	2.9	1.7	2.1	3.0
Homemaker	1.1	1.2	1.3	1.8
Student, retired, unemployed	2.5	3.3	4.2	5.0
Other	18.3	15.3	18.9	20.0
Total	100.0	100.0	100.0	100.0
Student's employment status:				
Full-time	38.0	40.6	51.8	51.1
Part-time	36.7	27.3	25.2	19.2
Full-time student	6.4	4.5	6.1	9.2
Homemaker	3.5	10.9	4.5	3.0
Retired	1.5	6.3	1.7	3.4
Unemployed, actively seeking employment	5.1	4.6	5.2	7.7
Unemployed, not seeking employment	5.7	4.3	4.6	6.1
Active duty, guard/ selected reserve	3.1	1.5	0.9	0.3
Total	100.0	100.0	100.0	100.0

Academic Characteristics

Only two academic characteristics of curriculum students were selected for presentation in this section: prior enrollment in four-year institutions and prior school setting. These data are found in Table 34.

Prior Enrollment in a Four-Year Institution

The highest percentage of students who reported prior enrollment in a four-year college/university was in the general program area (38 percent) followed by college transfer (25 percent), and technical education (25 percent). Only 12 percent of the vocational education students had previous enrollment in a four-year college/university.

Prior School Setting

Approximately one half of the college transfer and vocational education students reported their prior school setting as kindergarten to high school. Thirty-three percent of the general education students and 22 percent of the college transfer students reported a public or private four-year college/university as their prior school setting. Less than 12 percent of the respondents reported attending two or four year private colleges.

Attendance Characteristics

The selected attendance characteristics of curriculum students presented in this section are: (a) time of attendance, (b) location of classes, (c) number of courses this quarter, (d) credit hours this quarter, (e) total quarters at this institution, (f) distance to class one way, (g) choice of institution, (h) preference of institution, (i) source of most influence in decision to attend, (j) source of first information about program, (k) source of financial aid, (l) amount of financial aid, (m) book and supply expenses, (n) child care expenses, (o) educational goals, (p) graduation intentions, (q) highest level of education planned, (r) employment plans after course/study, and (s) reasons for continuing their education. Percentage distributions and rankings for attendance characteristics are presented in Tables 35 to 42.

Time of Attendance and Location of Classes

Approximately one half of the college transfer (58 percent) and general education students (51 percent) reported attending classes during the morning with slightly more than one third attending classes in the evenings. The attendance patterns for technical and vocational students were fairly evenly divided between mornings (44 percent) and evenings (46 percent). Few students reported attending classes during the afternoon or on weekends.

Table 34 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, prior enrollment in a four-year college, and prior school setting

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Prior enrollment in a four-year college/university:				
Yes	25.4	37.5	24.5	12.0
No	74.6	62.5	75.5	88.0
Total	100.0	100.0	100.0	100.0
Prior school setting:				
Kindergarten to high school	51.3	37.3	42.5	48.4
Another community college	7.6	5.8	12.1	11.3
Two year private college	2.1	2.6	2.2	1.1
Public four-year college/university	17.0	24.1	12.3	5.0
Private four-year college/university	5.1	9.3	5.0	1.6
Vocational/trade school	2.5	2.2	5.0	9.5
Business/industry	5.1	4.6	8.7	6.3
Labor/professional association	1.2	0.8	2.3	2.0
Government agency	2.8	1.7	3.5	5.4
Community agency	0.6	1.3	0.5	0.5
Other	4.7	10.3	5.9	8.9
Total	100.0	100.0	100.0	100.0

Table 35 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, time of attendance, location of classes, number of courses this quarter, credit hours this quarter, total quarters at this institution, and distance to class

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Time of attendance:				
Mornings	58.2	50.5	43.6	44.0
Afternoons	8.1	5.5	8.8	11.0
Evenings	33.7	37.0	46.8	45.0
Weekends	0.0	7.0	0.8	0.0
Total	100.0	100.0	100.0	100.0
Location of classes:				
Main campus	90.4	69.7	81.8	71.9
Workplace	0.2	0.0	1.0	8.5
Branch campus	2.8	10.9	8.6	6.9
Other off-campus site	4.7	11.5	6.0	11.3
Equally divided between on-campus and off-campus locations	1.9	7.9	2.6	1.4
Total	100.0	100.0	100.0	100.0
Number of courses this quarter:				
1	33.3	48.1	43.2	55.3
2	17.2	20.3	19.0	16.8
3	18.9	14.1	13.7	11.9
4	16.3	11.8	13.4	9.2
5	9.2	4.5	7.9	4.5
6	4.1	1.2	2.2	1.9
7	0.8	0.0	0.4	0.4
8	0.1	0.0	0.2	0.0
9	0.1	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0
Credit hours this quarter:				
Not taking courses for credit	3.7	17.4	4.0	4.5
1-3 credit hours	15.5	30.8	21.0	12.1
4-7 credit hours	21.2	13.9	24.7	27.6
8-11 credit hours	14.8	9.1	13.1	14.2
12-15 credit hours	26.7	17.6	19.7	16.4
16-19 credit hours	15.2	6.9	11.4	12.0
20 or more credit hours	3.0	4.3	6.1	13.2
Total	100.0	100.0	100.0	100.0

Table 35 (continued)

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Total quarters at this institution:				
First	41.9	30.6	39.0	47.3
2	9.3	14.4	9.7	11.5
3	8.0	9.4	9.7	9.4
4	13.0	15.5	7.9	9.1
5	8.0	7.3	9.5	7.4
6	3.8	3.2	3.8	4.3
7	4.3	3.7	3.2	1.6
8	3.4	2.7	3.8	1.2
9 or more	8.3	13.2	13.4	8.2
Total	100.0	100.0	100.0	100.0
Distance to class one way:				
0-3 miles	17.9	17.5	15.1	18.2
4-5 miles	16.9	20.2	17.5	12.2
6-10 miles	22.0	30.3	24.6	24.2
11-15 miles	17.2	15.2	15.3	15.1
16-20 miles	9.1	8.0	10.2	10.5
21-25 miles	7.4	3.8	6.6	7.3
26-30 miles	4.5	2.4	4.8	6.1
31 or more miles	5.0	2.6	5.9	6.4
Total	100.0	100.0	100.0	100.0

A majority of all curriculum students attended classes on the main campus. The percentages were as follows: college transfer (90 percent), general education (70 percent), technical education (82 percent), and vocational education students (72 percent). About nine percent of the vocational students were enrolled in classes at their workplace.

Number of Courses, Credit Hours, and Total Quarters Enrolled

The majority of all curriculum students were enrolled in one or two courses. Fifty-five percent of the vocational students were enrolled in one course compared to 33 percent of the college transfer students. In all four curriculum program areas, the largest proportions of students were enrolled in one course.

A majority of curriculum students in all programs were taking fewer than 12 credit hours. Students must be enrolled in 12 hours to be counted as full-time students. Thus, most of these students were enrolled as part-time students. The percentages for part-time students for the curriculum program areas were as follows: college transfer (55 percent), general education (71 percent), technical education (63 percent), and vocational education students (58 percent).

When curriculum students were asked to respond to the total quarters enrolled at their college, the largest proportions of students reported that they were in their first quarter. For vocational students the percentage was 47 percent followed by college transfer at 42 percent, technical education at 39 percent, and 31 percent for general education. The majority of curriculum students in all program areas had been enrolled for three or less quarters.

Distance Traveled to Class One Way

More than one half of all curriculum students traveled 10 or fewer miles to class one way. Approximately one third of the students traveled five or fewer miles to class one way. Seventy-five percent of all curriculum students travel 15 or fewer miles to class one way.

Choice of Institution

The majority of all curriculum students reported they would have attended another institution if theirs had not existed (Table 36). Vocational students (56 percent) were the least likely to attend another college while the college transfer students (75 percent) were the most likely to attend another college.

When students were asked to choose and rank three of seven educational institutions, in order of preference, assuming they could attend any one of them, the institution they were attending was the first choice for all curriculum students except college transfer (Table 37). College transfer students ranked a public four-year college or university as their first choice followed by the community college they were attending as their second choice. General and technical education students ranked the public four-year college or university as their second choice, while the vocational education students ranked another community college as their second choice. The third choice was a private four-year college for college transfer, general, and technical education students. For the vocational students, their third choice was a public four-year college/university.

Table 36 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, and would have attended another institution had this one not existed

Variable	Curriculum students: College transfer	General education	Technical education	Vocational education
Would have attended another institution had this one not existed:				
Yes	74.6	64.8	66.9	55.8
No	25.4	35.2	33.1	44.2
Total	100.0	100.0	100.0	100.0

Table 37 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, rank order, and raw scores of preference of institution to attend

Variable	College transfer		General education		Technical education		Vocational education	
	Rank	Raw* score	Rank	Raw score	Rank	Raw score	Rank	Raw score
Preference of institution:								
This community college	2	35.8	1	18.1	1	145.0	1	44.7
Another community college	4	9.7	4	5.3	4	52.2	2	18.9
A private two-year college	5	7.6	6	2.7	5	31.0	6	7.9
A private trade/professional school	6	6.4	7	2.0	6	26.8	4	15.2
A public 4-year college/university	1	47.3	2	14.2	2	102.3	3	15.8
A private 4-year college/university	3	28.4	3	8.9	3	55.1	7	7.3
Another type of school not listed	7	5.6	5	3.0	7	20.3	5	8.2

*Raw score is the expanded frequency multiplied by the converted rank value of 3 for a first choice, two for a second choice, and 1 for a third choice. Raw scores are reported in terms of 1,000 and reflect normal rounding procedures.

Sources of Most Influence to Attend and First Information About Program

Curriculum students were influenced to attend college by a variety of different sources depending on the program areas in which they were enrolled (Table 38). Parents were cited as the most influential source for college transfer students (28 percent), for technical (16 percent), and general and vocational education students (15 percent). For general education students, their friends, college recruiters, and literature were influential in their decisions to enroll. Technical students were also influenced by spouses, college literature, and employers. Employers were influential for both vocational and technical students. High school personnel were not very influential in students' decisions to attend their local community college.

Literature from the college was the major source of first information cited by the largest proportions of curriculum students in all program areas. The second major source of information was college recruiters or other staff members. Employers and former students were sources of information for vocational students but not for other program areas. High school personnel and newspapers were also sources of information. Curriculum students' decisions to attend college were influenced by different sources than their sources of information. Parents were most influential in decisions to attend college, while institutional personnel and literature were important sources of information.

Sources and Amount of Financial Aid

The overwhelming majority of curriculum students reported receiving no financial aid (Table 39). The range was from 86 percent for general education students to 72 percent for vocational students. The Pell Grant, employer tuition assistance, Veterans Administration educational benefits, and scholarships were the most frequent sources of financial aid cited by curriculum students. Slightly more than one half of the curriculum students who reported receiving financial aid received less than $700 for the 1988-89 school year. Among the curriculum program areas, the general education students reported receiving less financial aid than the college transfer, technical, and vocational education students.

Book and Supply Expenses

Approximately half the college transfer students reported spending $100 or more for books and supplies. Most general, technical, and vocational students reported having no expense or spending less than $100 for books and supplies during the 1988 fall quarter.

Table 38 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, source of most influence to attend, and source of first information about program

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Source of most influence to attend:				
Recruiter or staff from college	5.5	11.9	6.2	7.8
Literature from this college	9.2	11.2	11.0	7.9
Radio, TV, newspaper	1.4	3.7	2.7	1.7
Employer	4.5	1.4	10.4	14.6
Personnel at a four-year college or university	3.9	3.9	0.9	0.8
High school personnel	7.9	4.4	4.2	5.3
Parent	28.1	15.0	16.0	15.1
Spouse	8.4	9.1	11.2	9.5
Child	1.4	0.7	2.1	2.1
Other relative	4.0	3.1	3.7	4.6
Current student at this college	5.4	5.0	4.9	2.6
Former student of this college	5.4	8.8	5.2	6.4
Friend, not a student here	4.5	12.0	6.0	6.1
Social service agency	1.1	0.3	1.5	1.4
Other, not listed	9.3	9.5	14.0	14.1
Total	100.0	100.0	100.0	100.0
Source of first information about the program:				
Recruiter or other staff member from this college	24.4	16.3	14.1	13.4
Literature from this institution	25.1	24.1	33.9	21.0
Radio	0.3	1.6	0.1	0.2
TV	0.4	2.9	0.6	0.5
Newspaper	5.8	8.9	5.9	5.1
Employer	1.0	0.4	5.8	11.8
Personnel at a four-year college or university	4.5	1.8	0.8	1.2
High school personnel	9.6	8.4	6.5	7.9
Parent	4.7	3.3	2.6	5.6
Spouse	1.0	2.9	1.5	0.8
Child	0.2	0.1	0.3	0.4
Other relative	2.4	3.0	2.8	2.8
Current student at this college	3.8	7.7	4.8	3.7
Former student of this college	4.1	4.3	6.5	9.3
Friend, not a student here	1.8	9.9	3.0	4.5
Social service agency	0.5	0.2	1.2	1.1
Other, not listed	10.4	4.2	9.6	10.7
Total	100.0	100.0	100.0	100.0

Table 39 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, sources of financial aid, amount of financial aid, book and supply expenses, and child care expenses

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Sources of financial aid:				
Not receiving financial aid	79.4	85.7	73.2	72.2
JPTA	0.1	0.9	1.6	3.0
Pell Grant	5.1	3.2	6.0	6.9
SEOG	0.3	0.2	0.4	0.6
Educational loan	0.9	0.3	1.2	1.2
Scholarship	4.3	1.7	3.5	2.1
Veterans Administration	3.5	5.3	3.8	4.0
N.C. student incentive grant	0.4	0.0	0.5	0.6
College work-study	0.8	0.9	1.1	0.7
Vocational rehabilitation	0.6	0.3	0.9	3.0
Employer tuition assistance	4.6	1.5	7.8	5.7
Total	100.0	100.0	100.0	100.0
Current amount of financial aid:				
Not receiving financial aid	78.2	85.7	75.4	76.5
Under $200	3.3	1.8	4.9	4.6
$200-$399	4.3	2.3	3.9	3.7
$400-$699	3.8	2.5	3.3	3.4
$700-$999	1.6	2.0	2.1	2.7
$1,000-$1,499	4.4	2.1	4.7	3.9
$1,500-$1,999	1.3	0.9	1.8	1.6
$2,000-$2,499	1.0	1.4	1.0	0.9
$2,500-$2,999	0.5	0.2	0.8	0.9
$3,000-$3,999	0.6	0.2	0.8	0.8
$4,000 or more	1.0	0.9	1.3	1.0
Total	100.0	100.0	100.0	100.0
Book and supply expenses:				
No expense	5.8	11.8	8.2	21.6
Under $50	19.3	38.7	24.4	28.3
$50-$99	24.7	23.6	26.2	19.0
$100-$149	25.5	12.2	18.8	12.1
$150-$199	14.7	8.5	10.9	7.7
$200-$249	6.7	3.9	5.9	4.6
$250-$299	2.5	0.8	2.2	2.4
$300-$499	0.5	0.4	2.3	3.4
$500 or more	0.3	0.1	1.1	0.9
Total	100.0	100.0	100.0	100.0

Table 39 (continued)

Variable	Curriculum students: College transfer	General education	Technical education	Vocational education
Pay for child care in order to attend:				
No, I do not need child care	89.1	89.2	82.2	81.6
No, paid by another source	1.0	0.4	1.5	3.8
No, provided at no expense	3.9	3.8	7.6	5.4
Yes, less than $50 per month	1.9	2.7	3.1	3.9
Yes, $50-$99 per month	1.6	1.5	1.7	2.3
Yes, $100-$149 per month	0.9	1.4	1.6	1.3
Yes, $150-$199 per month	0.8	0.8	1.0	0.7
Yes, $200-$249 per month	0.2	0.0	0.8	0.5
Yes, $250 or more per month	0.6	0.2	0.5	0.5
Total	100.0	100.0	100.0	100.0

Child Care Expenses

Over 91 percent of all curriculum students in all program areas reported they had no child care expenses. Of the students who reported child care expenses, most had expenses under $100 per month.

Educational Goals, Graduation Intentions, and Highest Level of Education Planned

Major differences were observed among curriculum students' education goals and the program areas in which they were enrolled. The majority of college transfer students had a primary education goal of preparing to transfer to a four-year college (66 percent), while most technical and vocational students had educational goals related to jobs (Table 40). The largest proportions of technical and vocational students were preparing for a different job. The primary education goals of the general education students were preparing for a four-year college (38 percent) and for self-enrichment (31 percent).

When students were asked to indicate their primary graduation intention while attending the community college, several major differences were apparent according to the data in Table 40. Fifty-four percent of the college transfer students intended to earn an associate degree, while 44 percent of the general education students planned to complete selected courses and not to graduate from a degree program. For technical students, 54 percent planned to earn an associate degree in a career program, while two thirds of the vocational students intended to earn a diploma or certificate in career programs.

Table 40 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, educational goal, primary graduation intention, and highest level of education intended

Variable	Curriculum students			
	College transfer	General education	Technical education	Vocational education
Primary education goal while at this college:				
Explore a new academic career area	6.4	6.2	12.6	10.7
Prepare for a first job	6.7	3.8	18.1	16.9
Prepare for a different job	8.5	10.1	29.2	33.4
Update/improve skills for current job	3.5	0.8	19.8	20.8
Prepare for transfer to four-year college	65.8	37.5	9.7	2.0
For self-enrichment	7.6	31.2	7.3	10.8
Cope with a major change in life	1.0	2.5	2.5	4.3
Improve basic skills	0.5	7.9	0.8	1.1
Total	100.0	100.0	100.0	100.0
Primary graduation intentions while at this college:				
Complete selected courses, do not intend to graduate	26.5	43.7	21.6	19.9
Earn high school diploma/GED	0.6	12.9	0.5	1.9
Earn a college diploma in a career program	6.2	5.2	10.0	38.1
Earn a college certificate in a career program	1.9	1.5	5.6	28.5
Earn an associate degree in a career program	11.2	8.1	54.0	9.9
Earn an associate degree in a college transfer program	53.6	28.6	8.3	1.7
Total	100.0	100.0	100.0	100.0
Highest level of education you plan to obtain:				
High school diploma or GED	0.7	7.0	1.3	3.9
Vocational diploma	1.7	0.7	4.1	42.5
Technical degree	1.5	1.6	6.8	9.0
Associate degree	9.6	9.7	35.4	13.9
Bachelor's degree	44.3	35.6	27.2	10.0
Master's degree	29.2	24.0	13.4	6.1
Doctorate	7.8	7.1	2.4	1.3
Other	5.2	14.3	9.4	13.3
Total	100.0	100.0	100.0	100.0

With regard to the highest level of education planned to obtain, seventy-four percent of the college transfer students and 60 percent of the general education students planned to obtain a bachelor's or master's degree, compared with 40 percent of the technical and 16 percent of the vocational students. About one third of the technical students planned to obtain an associate degree, while 43 percent of the vocational students planned to obtain the vocational diploma.Employment Plans After Course of Study

Employment Plans After Course of Study

Based on the data in Table 41, a clear majority of curriculum students planned to work in North Carolina after completing their course of study. Larger proportions of technical and vocational students planned to work in the local area served by the college, when compared to college transfer and general education students. Sixteen percent of the college transfer students indicated they would work in another state.

Table 41 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program and employment plans after course of study

Variable	College transfer	Curriculum students: General education	Technical education	Vocational education
Employment plans after course of study:				
Work in the area that the college serves	19.3	19.4	32.2	31.1
Probably or definitely work in North Carolina	51.5	39.5	48.8	48.6
Work in another state	16.2	8.2	9.4	7.9
Military service	3.0	3.2	1.2	1.2
Keeping house	0.7	2.9	0.6	0.2
Retirement	1.1	5.2	1.4	2.0
Other	8.2	21.6	6.4	9.0
Total	100.0	100.0	100.0	100.0

Reasons for Continuing Their Education

The respondents were asked to rank order the five most important reasons for continuing their education (Table 42). Students in all four curriculum program areas ranked "to earn more money" as their first reason. General education students ranked "to learn more things of interest" as their second choice, whereas all others ranked "to get a better job" as their second reason. The students in all four curriculum program areas were quite similar in their top five reasons for continuing their education, although there was slight variation in the ranked reasons.

Table 42 Estimated percentage distribution of curriculum students enrolled in the North Carolina Community College System, Fall 1988, by program, rank order, and raw scores of reasons for continuing their education

	Curriculum students							
	College transfer		**General education**		**Technical education**		**Vocational education**	
Variable	Rank	Raw* score	Rank	Raw score	Rank	Raw score	Rank	Raw score
Reason for continuing their education:								
Contribute more to society	3	42.4	4	14.6	4	103.6	4	26.7
Earn more money	1	83.5	1	24.9	1	264.6	1	76.4
Become more cultured	6	27.3	6	12.9	7	64.2	7	16.6
Gain general education	5	35.7	5	14.4	5	100.4	6	25.0
Get better job	2	69.3	3	19.6	2	234.7	2	59.0
Improve basic skills	11	11.1	9	7.2	9	42.4	10	11.9
Improve social life	10	13.4	7	9.1	11	35.7	9	14.0
Learn more things of interest	4	38.8	2	19.8	3	131.5	3	42.6
Meet interesting people	9	14.8	8	8.9	8	46.0	8	16.5
Parents/spouse wanted me to go	7	16.2	10	7.1	10	39.9	11	11.0
Nothing better to do	12	4.5	12	2.7	12	16.7	12	7.7
Tired of what I have been doing	8	15.3	11	6.5	6	74.2	5	25.6

*Raw score is the expanded frequency multiplied by the converted rank value. Raw scores are reported in terms of 1,000 and reflect normal rounding procedures.

Highlights of the Curriculum Student Profiles

Sex: Female students are in the majority in all curriculum program areas except for vocational education in which males comprised 61 percent of the student enrollment. The largest proportion of females was in the technical education program (69 percent).

Race: Racial groups were unequally distributed within the four curriculum program areas. The majority of students in all curriculum program areas were white. However, minority groups comprised 15 percent of the college transfer student enrollment, 20 percent of the technical education enrollment, 22 percent of general education enrollment, and 27 percent of the vocational education enrollment.

Age: The students enrolled in the college transfer program were much younger than students enrolled in other curriculum program areas. Fifty-eight percent of the college transfer students were 22 years of age or younger, compared to 34 percent of the technical and vocational students.

Marital Status: The largest proportion of single curriculum students was in the college transfer program, whereas there were small differences between the proportions of single and married students enrolled in the general, technical, and vocational education programs.

Education--Student and Parents: The majority of all curriculum students had at least a high school level of education, whereas most parents of curriculum students had a high school level of education or less.

Student Income: The students in the college transfer program had the lowest level of income, while those in general education had the highest levels of income.

Occupation Head of Household: A higher proportion of vocational students appeared to come from blue-collar backgrounds, whereas higher proportions of college transfer, general, and technical education students were more likely to come from white-collar backgrounds.

Employment Status: The largest proportions of students in all curriculum programs were employed full-time.

Prior Enrollment in a Four-year Institution: Over one third of the general education student enrollment had prior enrollment in a four-year institution, compared to 12 percent of the vocational education enrollments.

Time of Attendance: The majority of college transfer (58 percent) and general education (51 percent) students attended morning classes, whereas the technical and vocational students attended morning and evening classes.

Number Of Courses and Credit Hours: The majority of all curriculum students were taking one or two courses for fewer than 12 credit hours.

Choice of Institution: The majority of all curriculum students reported they would have attended another institution if theirs had not existed. However, curriculum students in all programs except college transfer, responded that the institution they were attending was their first choice. College transfer students ranked a public four-year college or university as their first choice of institution to attend.

Source of Influence to Attend and First Information About Program: Parents and family members were reported as the primary sources of influence to attend. Literature from the college was the major source of first information cited by the largest proportions of curriculum students in all program areas, followed by college recruiters or other staff members.

Educational Goals, Graduation Intentions, and Highest Level of Education Planned: The majority of college transfer students had a primary education goal of preparing to transfer to a four-year college (66 percent), while most technical and vocational students had job-related educational goals. Most college transfer students intended to earn an associate degree, although 54 percent of the technical students planned to earn an associate degree in a career program and two thirds of the vocational students intended to earn a diploma or certificate in career programs. The largest proportions of college transfer and general education student enrollments planned to obtain degrees from other higher education institutions.

Reasons for Continuing Their Education: Students in all four curriculum program areas ranked "to earn more money" as their foremost reason. General education students ranked "to learn more things of interest" as their second reasons, whereas all other curriculum students reported the second reason as "to get a better job."

Chapter 8
Profiles of Continuing Education Students Within Program Areas

This chapter presents the continuing education student profiles for students enrolled in the academic extension, preparatory education, avocational extension, practical skills, and occupational extension program areas. The profiles are described in terms of selected demographic, socioeconomic, academic, and attendance characteristics. Because of the small number of respondents in the recreational extension program area (five respondents), the data from these respondents were added to the avocational extension program area. Highlights on continuing education students within program areas are included at the end of the chapter.

Demographic Characteristics

The demographic characteristics used to develop profiles for continuing education students were sex, race, age, marital status, and veteran status. These data are presented in Table 43.

Sex

Higher proportions of females than males were enrolled in all continuing education programs. However, the proportions of males and females varied greatly from one program area to another. The largest percentage enrollments for males were in the occupational program area (48 percent) and the preparatory program area (44 percent). The smallest proportion of females (52 percent) was in the occupational program area, while only nine percent of the avocational students were male.

Race

More than 80 percent of all students enrolled in academic, avocational, occupational, and practical skills education programs were white compared to a 47 percent white enrollment in the preparatory program area. Fifty-three percent of the enrollments in the preparatory program area were non-white students. Forty-four percent of the preparatory education students were black.

Age

The data in Table 43 indicate some interesting differences in the ages of continuing education students by program area. The youngest continuing education students were

Table 43 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, sex, race, age, marital status, and veteran status

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Sex:					
Female	74.4	55.6	91.2	51.6	69.0
Male	25.6	44.4	8.8	48.4	31.0
Total	100.0	100.0	100.0	100.0	100.0
Race:					
American Indian	2.8	1.7	0.5	1.8	0.0
Asian	0.0	3.2	0.0	0.3	0.0
Black	7.0	43.8	17.6	12.6	10.4
Hispanic origin	0.0	4.6	0.0	0.9	0.0
White	90.2	46.6	81.6	83.5	89.6
Other	0.0	0.1	0.3	0.9	0.0
Total	100.0	100.0	100.0	100.0	100.0
Age:					
22 and younger	10.9	32.8	4.5	15.9	4.0
23-29 years	9.8	17.6	6.6	18.9	1.8
30-39 years	14.5	19.3	10.8	27.4	6.2
40-49 years	11.7	13.3	11.4	24.3	8.5
50-59 years	4.2	7.8	12.7	9.3	11.1
60-69 years	17.3	5.8	22.3	3.4	37.5
70-79 years	25.6	3.0	25.6	0.8	27.3
80 and older	6.0	0.4	6.1	0.0	3.6
Total	100.0	100.0	100.0	100.0	100.0
Marital status:					
Single, never married	16.7	43.4	8.0	21.7	5.4
Married, not separated	63.4	38.3	57.8	62.2	66.0
Separated	2.4	6.4	1.2	4.8	1.4
Widowed	16.8	6.4	28.8	3.3	22.1
Divorced	0.7	5.5	4.2	8.0	5.1
Total	100.0	100.0	100.0	100.0	100.0
Veteran status:					
Yes	10.2	5.3	5.7	15.8	18.9
No	89.8	94.7	94.3	84.2	81.1
Total	100.0	100.0	100.0	100.0	100.0

in preparatory education--50 percent were under the age of 30 as contrasted to 35 percent in occupational extension. Continuing education students over 50 years of age comprised the largest proportions in three program areas: academic education (53 percent), avocational (67 percent), and practical skills (80 percent). In avocational and practical skills programs, more than 50 percent of the students were 60 years of age and older.

Marital Status

The majority of continuing education students in all program areas, except preparatory, reported their marital status as married. Preparatory students were more likely to be single (43 percent). Twelve percent of the preparatory and occupational program areas were either separated or divorced. Approximately 29 and 22 percent of the continuing education students enrolled in the avocational and practical skills program areas were widowed.

Veteran Status

An overwhelming majority of all continuing education students were not military veterans. The largest proportion of veterans (19 percent) was enrolled in the practical skills program.

Socioeconomic Characteristics

The socioeconomic characteristics used in developing continuing education student profiles were: student's education, father's education, mother's education, student's income, parents' income, head of household, occupation of head of household, and student's employment status. The data on socioeconomic characteristics are presented in Tables 44 and 45.

Education--Student and Parents

Based on the data in Table 44 variations are observed in the percentage distributions of continuing education students by level of education and program areas. Thirty-four percent of the academic education students indicated they had college degrees, as contrasted to 20 percent of the students in the occupational and practical skills program. In the preparatory program area, 28 percent of the students had an eight grade education or less, as compared to 17 percent in the avocational program area. Two clear patterns existed in the data. First, more than 50 percent of all continuing education students in academic and occupational program areas reported that they had attended one year or more of college. The second pattern is that more than 50 percent of all continuing

Table 44 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, student's education, father's education, and mother's education

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Student's education:					
8th grade or less	6.6	27.6	17.1	2.1	11.2
9th-11th grade	4.5	55.0	9.0	6.0	10.1
High school	19.1	9.8	28.9	34.8	27.8
GED diploma	2.8	1.8	2.2	6.3	2.9
1 yr beyond high school	13.8	1.9	12.2	15.3	10.6
2-3 yrs of college	18.8	1.3	14.1	15.8	17.3
College graduate	23.3	2.5	9.8	10.9	11.5
Graduate work	11.1	0.1	6.7	8.8	8.6
Total	100.0	100.0	100.0	100.0	100.0
Father's education:					
8th grade or less	30.1	52.4	50.5	30.1	50.2
9th-11th grade	14.1	15.5	14.0	16.5	14.2
High school	25.8	16.2	20.8	27.8	18.2
GED diploma	1.6	3.5	0.5	2.2	1.4
1 yr beyond high school	9.5	1.7	1.9	5.3	4.6
2-3 yrs of college	5.9	5.1	3.7	8.0	2.6
College graduate	9.1	4.6	5.5	6.9	6.6
Graduate work	3.9	1.0	3.1	3.2	2.2
Total	100.0	100.0	100.0	100.0	100.0
Mother's education:					
8th grade or less	20.3	44.4	43.7	20.7	43.3
9th-11th grade	20.0	19.2	17.1	17.5	17.7
High school	29.5	18.0	24.5	37.2	18.3
GED diploma	1.2	3.1	0.3	2.7	0.8
1 yr beyond high school	12.5	3.4	4.6	6.3	4.9
2-3 yrs of college	11.9	6.4	4.1	7.9	6.9
College graduate	4.6	4.3	3.8	6.0	5.2
Graduate work	0.0	1.2	1.9	1.7	2.9
Total	100.0	100.0	100.0	100.0	100.0

education students enrolled in preparatory, avocational, and practical skills program areas had a high school education or less.

Over 50 percent of the students in the preparatory, avocational, and practical skills program areas reported their fathers had an eighth grade education or less. Over 60 percent of the students in the preparatory, avocational, and practical skills program areas reported their mothers had an education level of ninth to eleventh grade. The proportion of mothers who had college degrees was lower in all program areas than the student's fathers. In general, the data suggested that mothers tended to have higher levels of education than fathers. Overall, students had higher levels of education than their parents, except in preparatory education where 83 percent of the students had an llth grade or less education compared to two thirds of their parents.

Income--Student and Parents

Considerable variation existed between income levels and enrollments in continuing education program areas. Approximately one half of the students in academic and occupational program areas reported their 1987 income to be $25,000 or higher (Table 45). More than one half of the preparatory students reported their income levels to be less than $10,000. Approximately one half of the students enrolled in avocational and practical skills program areas reported income under $20,000. Preparatory students had markedly less income, as evidenced by 38 percent who reported income levels of less than $4,999.

The majority of continuing education students in the avocational and practical skills program areas reported their parents were no longer living. Fifty-three percent of the preparatory education students reported parental income levels below $20,000. Twenty-three percent of the academic education students reported parental income levels above $40,000.

Head of Household

Over 50 percent of the academic education, occupational, and practical skills students reported they were the head of household. Twenty-eight percent of the preparatory education students responded that their father or mother was head of household. In most instances the student or spouse was the head of household.

Occupation of Head of Household

Academic education (36 percent) and occupational education students (25 percent) were in situations where the head of household was more likely to be in an executive/administration or professional/specialty occupation, i.e. white-collar occupation. This was in contrast to nine percent of the preparatory education students

Table 45 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, student's 1987 income, parents' 1987 income, head of household, occupational category of head of household, and student's employment status

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Student's 1987 income:					
$0-$4,999	10.3	37.5	27.1	7.5	7.7
$5,000-$7,499	7.2	10.7	6.5	3.9	11.4
$7,500-$9,999	3.4	5.7	4.7	4.2	6.8
$10,000-$14,999	8.7	13.6	5.8	14.0	12.5
$15,000-$19,999	7.2	9.1	7.1	11.2	9.8
$20,000-$24,999	9.2	9.2	9.1	10.8	6.5
$25,000-$29,999	12.3	4.8	8.3	12.3	8.9
$30,000-$39,999	10.3	7.3	13.0	13.6	14.6
$40,000-$49,999	15.6	0.8	8.0	10.3	7.8
$50,000-$59,999	7.0	0.4	4.6	6.1	7.7
$60,000-$69,999	4.0	0.3	1.7	2.4	2.7
$70,000 or more	4.8	0.6	4.1	3.7	3.6
Total	100.0	100.0	100.0	100.0	100.0
Parents' 1987 income:					
$0-$4,999	6.5	16.7	9.2	8.2	10.1
$5,000-$7,499	3.8	7.8	3.2	4.7	4.7
$7,500-$9,999	2.2	9.1	1.7	4.3	2.4
$10,000-$14,999	13.6	12.4	3.2	10.6	6.5
$15,000-$19,999	10.7	7.2	3.8	9.3	4.2
$20,000-$24,999	5.1	9.8	8.8	9.7	1.9
$25,000-$29,999	4.5	4.8	2.6	8.3	2.4
$30,000-$39,999	2.3	8.7	2.6	9.4	3.4
$40,000-$49,999	5.6	3.7	4.1	7.7	2.0
$50,000-$59,999	10.5	1.5	1.0	6.1	0.3
$60,000-$69,999	0.0	0.5	0.9	3.6	1.5
$70,000 or more	6.7	3.1	4.0	7.4	2.2
Parents no longer living	28.5	14.7	54.9	10.7	58.4
Total	100.0	100.0	100.0	100.0	100.0
Head of household:					
Father	6.8	17.1	1.6	11.2	1.8
Mother	2.1	11.0	0.6	3.3	1.6
Self	51.1	37.6	44.5	50.5	52.8
Spouse	38.0	24.7	46.5	32.8	42.0
Other relative	1.0	5.2	2.1	1.1	0.7
Other person, not listed	1.0	4.4	4.7	1.1	1.1
Total	100.0	100.0	100.0	100.0	100.0

Table 45 (continued)

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Occupational category of head of household:					
Executive, administration	19.2	5.1	9.2	15.9	11.2
Professional, specialty	17.1	3.4	7.7	9.3	6.6
Technicians, support	1.2	3.8	0.9	2.9	1.6
Sales	6.9	1.8	2.5	3.4	1.8
Administrative support	5.1	4.9	4.4	6.8	4.3
Private household	0.4	2.0	0.2	0.4	0.4
Protective service	1.7	1.4	1.1	4.2	1.3
Service	2.7	9.5	1.2	3.0	0.3
Farm, forest, fish	7.9	3.7	2.7	3.6	4.1
Precision, craft	2.8	16.2	8.7	14.9	2.9
Machine operator	2.3	7.7	1.8	3.9	2.6
Transportation	0.0	4.8	1.4	3.8	1.8
Handlers, laborers	1.4	3.7	0.8	1.7	1.1
Homemaker	7.0	4.5	4.8	1.4	11.9
Student,retired,unemployed	14.8	6.0	18.4	2.4	25.4
Other	9.5	21.5	34.2	22.3	22.7
Total	100.0	100.0	100.0	100.0	100.0
Student's employment status:					
Full-time	40.5	41.1	28.0	68.2	19.4
Part-time	10.8	12.8	6.9	11.5	6.7
Full-time student	0.3	2.4	0.3	1.7	0.0
Homemaker	8.8	9.0	13.6	5.2	17.7
Retired	36.4	5.0	40.9	2.9	53.8
Unemployed, actively seeking employment	0.3	18.1	1.1	3.8	0.8
Unemployed, not seeking employment	2.9	10.2	9.2	1.6	1.6
Active duty, guard/ selected reserve	0.0	1.4	0.0	5.1	0.0
Total	100.0	100.0	100.0	100.0	100.0

who reported white-collar occupations for head of household. The preparatory students (49 percent) were likely to be in situations where the head of household was in a blue-collar occupation. Approximately one third of the occupational education students reported occupations that are categorized as blue-collar occupations.

Student's Employment Status

The largest proportion of full-time employed students was in occupational education (68 percent) followed by 41 percent in both preparatory and academic education program areas. Part-time employed students ranged from seven percent to 13 percent. Twenty-eight percent of the preparatory education students were unemployed. The retired status accounted for 54 percent of the practical skills students, 41 percent of the avocational students, and 36 percent of the academic education students.

Academic Characteristics

Two academic characteristics were selected for use in describing the continuing education student profile: prior enrollment in a four-year college/university and prior school setting. The data are presented in Table 46.

Prior Enrollment in a Four-Year College/University

Forty-eight percent of the academic education students reported prior enrollment at a four-year college/university. Approximately one fourth of the avocational, occupational, and practical skills students reported prior enrollment in a four-year college/university. Among the preparatory students only five percent reported such enrollment. The majority of students in all program areas reported that they had never attended a four-year college or university.

Prior School Setting

Attendance at a public or private four-year college/university was reported by 38 percent of the academic education students, 20 percent of the occupational students, and 19 percent of the avocational students. Seventy-one percent of the preparatory students identified kindergarten to high school as their prior school setting. The largest proportions of students in all continuing education program areas reported their last school setting prior to enrolling in this college program was a high school or less.

Table 46 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, prior enrollment in a four-year college/university, and prior school setting

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Prior enrollment in a four-year college/university:					
Yes	48.4	5.3	27.4	30.7	28.3
No	51.6	94.7	72.6	69.3	71.7
Total	100.0	100.0	100.0	100.0	100.0
Prior school setting:					
Kindergarten to high school	23.9	70.9	38.1	33.0	26.5
Another community college	3.4	3.4	9.0	13.7	9.5
Two year private college	2.1	0.4	3.7	1.8	2.6
Public four-year college/ university	20.9	3.1	13.9	15.3	13.7
Private four-year college/ university	17.0	0.7	5.1	4.8	4.1
Vocational/trade school	7.5	6.5	4.1	9.5	7.1
Business/industry	5.2	3.3	4.1	7.3	16.5
Labor/professional association	4.8	0.1	2.5	1.6	0.4
Government agency	1.6	0.7	1.7	3.7	5.0
Community agency	0.0	1.2	1.0	0.7	1.0
Other	13.6	9.7	16.8	8.6	13.6
Total	100.0	100.0	100.0	100.0	100.0

Attendance Characteristics

Continuing education students were asked to respond to the following attendance characteristics: (a) time of attendance, (b) location of classes, (c) total quarters enrolled, (d) distance to class, (e) would have attended another institution had this one not existed, (f) source of most influence in decision to attend, (g) source of first information about program in which enrolled, (h) book and supply expenses, (i) employment plans after study, (j) reasons why continuing your education, and (k) preference of institution to attend. Data on these attendance characteristics are displayed in Tables 47 to 52.

Table 47 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, time of attendance, location of classes, total quarters at this institution, and distance to class

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Time of attendance:					
Mornings	15.6	29.4	41.0	12.0	55.7
Afternoons	11.6	22.4	14.9	4.8	10.2
Evenings	72.8	48.0	44.1	81.4	34.1
Weekends	0.0	0.2	0.0	1.8	0.0
Total	100.0	100.0	100.0	100.0	100.0
Location of classes:					
Main campus	17.0	33.4	24.4	48.2	25.5
Workplace	1.4	9.5	1.2	10.5	4.6
Branch campus	29.0	11.8	6.7	15.4	22.4
Other off-campus site	50.7	43.5	65.8	21.8	45.4
Equally divided between on-campus and off-campus locations	1.9	1.8	1.9	4.1	2.1
Total	100.0	100.0	100.0	100.0	100.0
Total quarters at this institution:					
1	33.1	47.2	26.4	55.9	18.4
2	10.5	16.6	7.5	11.3	11.9
3	8.0	9.6	5.4	7.0	6.7
4	2.4	5.9	7.4	6.7	5.8
5	9.8	2.2	3.5	2.4	6.1
6	9.4	5.1	2.4	3.2	3.9
7	2.8	1.5	2.3	1.1	4.8
8	1.5	1.3	4.0	1.5	4.2
9 or more	22.5	10.6	41.1	10.9	38.2
Total	100.0	100.0	100.0	100.0	100.0
Distance to class one-way:					
0-3 miles	41.7	43.7	35.0	25.0	21.8
4-5 miles	18.9	21.2	17.8	17.8	22.3
6-10 miles	18.7	18.6	22.1	20.4	28.3
11-15 miles	12.7	10.7	14.8	15.1	15.4
16-20 miles	3.2	3.1	4.4	8.6	3.7
21-25 miles	2.4	1.4	3.1	4.7	4.9
26-30 miles	1.6	0.6	0.9	3.4	2.6
31 or more miles	0.8	0.7	1.9	5.0	1.0
Total	100.0	100.0	100.0	100.0	100.0

Time of Attendance

Eighty-one percent of the occupational education students and 73 percent of the academic education students attended evening classes. More than 50 percent of the preparatory, avocational, and practical skills students attended day classes. Morning classes appeared to be more popular than afternoon classes.

Location of Classes

The data in Table 47 showed that the main campus was the location of classes for 48 percent of occupational education students and 33 percent of preparatory education students. The majority of academic education students (51 percent) and avocational education students (66 percent) were taking classes at an off-campus site, e.g. church, school, residence. The proportions of students attending classes at their workplace were quite small, ranging from one to 11 percent.

Total Quarters at this Institution

More than 60 percent of the preparatory and occupational education students were in their first or second quarter of enrollment. More than 50 percent of the practical skills education students had been enrolled for six quarters, as contrasted to five quarters for the avocational education students, and four quarters for the academic education students. Approximately 40 percent of the avocational education and practical skills education students reported enrollment for nine quarters or more.

Distance Traveled to Class One Way

The majority of academic education (61 percent), preparatory education (65 percent), and avocational education (53 percent) students traveled five miles or less to attend classes. More than three fourths of the academic, preparatory, and avocational education students traveled ten miles or less to attend class. Thirteen percent of the occupational education students traveled more than 20 miles.

Choice of Institution

When asked if they would have attended another institution had their institution not existed a majority of students in all continuing education program areas reported that they would not have attended another college (Table 48). The occupational and preparatory students were more likely than other continuing education students to attend another institution.

All continuing education students selected the community college they were attending as the first choice of institution to attend (Table 49). Preparatory, avocational, and practical skills education students selected another community college as the second choice. In contrast, academic and occupational education students selected a public

Table 48 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program and would have attended another institution had this one not existed

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Would have attended another institution had this one not existed:					
Yes	35.5	40.4	17.1	45.7	18.7
No	64.5	59.6	82.9	54.3	81.3
Total	100.0	100.0	100.0	100.0	100.0

Table 49 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, rank order and raw score of preference of institution to attend

Variable	Continuing education students									
	Academic education		**Preparatory education**		**Avocational education**		**Occupational education**		**Practical skills**	
	Rank	Raw* score	Rank	Raw score	Rank	Raw score	Rank	Raw score	Rank	Raw score
Preference of institution to attend:										
This community college	1	5.4	1	39.2	1	38.8	1	55.0	1	14.5
Another community college	3	1.9	2	14.8	2	14.0	3	22.8	2	5.1
A private 2-year college	7	0.6	6	6.4	7	3.3	7	8.6	7	0.7
A private trade or professional school	6	0.9	3	9.8	5	5.3	4	15.7	5	2.4
A public 4-year college or university	2	2.5	5	8.5	4	8.8	2	25.4	3	3.0
A private 4-year college or university	4	1.7	7	3.8	6	5.1	5	14.6	6	1.1
Another type of school not listed	5	1.2	4	9.7	3	9.6	6	12.1	4	2.6

*Raw score is the expanded frequency multiplied by the converted rank value. Raw scores are reported in terms of 1,000 and reflect normal rounding procedure.

four-year institution as the second choice. In general, the community college is clearly the first choice for continuing education students to attend among all postsecondary institutions.

Source of Most Influence to Attend

The sources which influenced students to attend varied in regards to the specific continuing education program areas (Table 50). A recruiter or some other staff person at the community college was the first source of influence for practical skills education students (29 percent), avocational education students (23 percent), and preparatory education students (14 percent). The first source of influence for occupational education students (27 percent) was their employer. Literature from the college was a first source of influence for academic education students (15 percent) and a second source for practical skills education students (18 percent).

Source of First Information About Program

The first source of information about the program was a recruiter or staff person for preparatory education students (17 percent) and avocational education students (22 percent). Literature from the college was the first source of information for academic education students (25 percent) and for practical skills education students (23 percent). The employer was the first source of information for occupational education students (25 percent). The newspaper was a second source of information for practical skills education students (22 percent) and academic education students (19 percent).

Book and Supply Expenses

More than three fourths of all continuing education students had no expenses or expenses under $50 for the fall 1988 quarter (Table 51). The largest proportion of avocational and practical skills education students (22 percent) had expenses over $50.

Employment Plans After Course of Study

The largest proportions of students planning for retirement were in practical skills education (47 percent), avocational education (40 percent), and academic education (31 percent). Seventy-one percent of the occupational education students and 64 percent of the preparatory education students were planning to work in North Carolina.

Table 50 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, source of most influence to attend, and source of first information about program

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Source of most influence to attend:					
Recruiter/staff at college	14.2	13.6	23.1	7.0	28.7
Literature from college	15.4	3.0	13.3	13.6	18.1
Radio, TV, newspaper	8.3	3.9	7.8	6.7	8.6
Employer	4.6	7.8	1.5	27.1	1.4
Personnel at a four-year college or university	3.2	1.2	0.8	0.7	0.5
High school personnel	0.4	3.4	0.6	1.5	0.0
Parent	5.2	13.5	2.4	4.3	2.4
Spouse	7.5	9.8	3.0	7.1	6.1
Child	2.4	4.8	2.1	1.1	0.1
Some other relative	3.8	5.9	4.1	2.2	5.4
Current student at this college	5.3	2.7	6.5	2.0	4.6
Former student at this college	6.0	2.7	2.8	3.3	4.8
Friend who is not a student here	3.0	6.4	7.6	3.3	8.9
Social service agency	0.0	8.9	9.0	1.9	0.1
Other, not listed here	20.7	12.4	15.4	18.2	10.3
Total	100.0	100.0	100.0	100.0	100.0
Source of first information about program:					
Recruiter or some other staff member from this college	13.3	17.2	21.9	10.0	21.0
Literature from institution	24.8	9.2	16.1	21.6	23.0
Radio	0.2	2.1	0.0	0.5	0.7
TV	0.0	1.5	0.2	0.2	0.1
Newspaper	18.8	6.1	15.5	12.3	21.5
Employer	3.6	7.4	0.2	24.9	1.2
Personnel at a four-year college or university	2.4	2.3	1.7	0.3	0.6
High school personnel	0.9	4.1	0.4	1.5	0.4
Parent	1.3	5.9	0.2	1.2	0.7
Spouse	1.2	2.9	0.4	0.8	1.2
Child	0.0	0.7	1.8	0.3	0.6
Other relative	2.3	4.4	4.2	2.3	2.7
Current student at this college	6.0	4.2	7.7	2.2	3.8
Former student at this college	2.9	5.1	2.7	3.1	11.2
Friend who is not a student here	7.0	6.8	8.2	3.1	5.7
Social service agency	0.7	8.5	8.7	1.0	0.1
Other, not listed here	14.6	11.6	10.1	14.7	5.5
Total	100.0	100.0	100.0	100.0	100.0

Table 51 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, book and supply expenses, and employment plans after course of study

Variable	Continuing education students				
	Academic education	Preparatory education	Avocational education	Occupational education	Practical skills
Book and supply expenses:					
No expense	52.2	70.8	27.7	40.9	35.4
Under $50	29.8	26.9	50.0	43.1	42.6
$50 - $99	10.0	1.0	14.4	9.8	14.2
$100 - $149	5.5	0.2	4.1	3.3	2.2
$150 - $199	0.8	0.5	2.6	1.1	3.3
$200 - $249	0.2	0.0	0.7	0.6	1.1
$250 - $299	0.6	0.0	0.1	0.7	0.8
$300 - $499	0.9	0.0	0.2	0.2	0.0
$500 or more	0.0	0.6	0.2	0.3	0.4
Total	100.0	100.0	100.0	100.0	100.0
Employment plans after course of study:					
Work in the area that the college serves	22.5	28.7	10.0	36.7	7.6
Probably or definitely work in NC	23.8	35.3	10.2	34.7	7.8
Work in another state	0.4	6.1	0.2	4.8	0.3
Military service	0.8	4.6	0.0	4.7	0.0
Keeping house	7.5	4.0	12.1	2.0	9.8
Retirement	31.4	5.8	40.4	2.4	46.7
Other	13.6	15.5	27.1	14.7	27.8
Total	100.0	100.0	100.0	100.0	100.0

Reasons for Continuing Their Education

There were noticeable differences among continuing education students in terms of reasons why they decided to continue their education (Table 52). To learn things of interest was chosen as the first reason for academic, avocational, and practical skills education students. To earn more money was selected as the first reason for preparatory and occupational education students. To meet people or improve one's social life was a second or third reason for academic, avocational, and practical skills education students.

Table 52 Estimated percentage distribution of continuing education students enrolled in the North Carolina Community College System, Fall 1988, by program, rank order and raw score of reasons for continuing their education

	Continuing education students									
	Academic education		**Preparatory education**		**Avocational education**		**Occupational education**		**Practical skills**	
Variable	Rank	Raw* score	Rank	Raw score	Rank	Raw score	Rank	Raw score	Rank	Raw score
Reason for continuing their education:										
Contribute more to society	2	5.6	6	20.6	5	19.0	4	55.5	5	5.7
Earn more money	5	3.8	1	43.3	7	10.9	1	76.0	9	3.5
Become more cultured	4	4.9	8	13.0	4	26.7	6	28.1	3	6.2
Gain general education	6	3.4	3	37.5	9	9.1	5	40.0	7	4.3
Get better job	7	3.1	4	34.8	11	4.2	3	58.1	10	2.0
Improve basic skills	11	1.0	2	39.6	12	1.8	10	13.3	12	0.9
Improve social life	8	2.6	10	12.0	3	28.2	9	16.9	4	6.2
Learn more things of interest	1	9.2	5	22.0	1	61.9	2	61.5	1	22.3
Meet interesting people	3	5.0	11	9.9	2	39.3	7	25.2	2	13.6
Parents/spouse wanted me to go	12	0.8	9	12.7	10	5.1	12	8.2	11	1.6
Nothing better to do	10	1.0	12	4.4	8	10.8	11	8.4	8	4.1
Tired of what I have been doing	9	1.4	7	14.0	6	15.5	8	20.3	6	5.1

*Raw score is the expanded frequency multiplied by the converted rank value. Raw scores are reported in terms of 1,000 and reflect normal rounding procedure.

Highlights of Continuing Education Students Within Program Areas

Sex: Higher proportions of females than males were enrolled in all continuing education programs; however, the proportions varied greatly among program areas. Higher proportions of males were enrolled in the occupational (48 percent) and preparatory (44 percent) program areas. On the other hand, higher proportions of females were enrolled in avocational (91 percent) and academic education (74 percent) program areas.

Race: It is important to note that more than 80 percent of all students in academic education, avocational, occupational, and practical skills program areas were white, in contrast to 47 percent of the preparatory education students. An overwhelming

proportion of blacks were enrolled in preparatory education programs compared to their enrollment in all other continuing education programs.

Age: The youngest continuing education students were enrolled in preparatory education programs, while the oldest were enrolled in practical skills programs. More than 50 percent of students enrolled in avocational and practical skills programs were 60 years of age or older.

Marital Status: The majority of continuing education students in all program areas except preparatory, were married. The highest proportion of preparatory students were single (43 percent).

Student's Level of Education: Major differences exist among the levels of education for continuing education students and the program areas in which they are enrolled. More than 50 percent of students in academic and occupational program areas had attended one or more years of college, while more than 50 percent of the students in preparatory, avocational, and practical skills program areas had a high school level of education or less. Eighty-three percent of the preparatory students had less than a high school level of education.

Student's Income: Approximately one half of the students enrolled in academic and occupational program areas earned $25,000 or more in 1987, compared to more than 50 percent of preparatory students who earned less than $10,000.

Employment Status: Continuing education students enrolled in occupational education programs were more likely to be employed (80 percent), whereas students enrolled in practical skills (25 percent) and avocational programs (35 percent) were less likely to be employed.

Time of Attendance: Most continuing education students enrolled in occupational and academic programs attended evening classes, while more than one half of the preparatory, avocational, and practical skills students attended classes during the day.

Distance Traveled to Classes: A clear majority of all continuing education students traveled 10 or fewer miles to attend classes.

Choice of Institution: The community college was clearly the first choice of institution to attend for all continuing education students.

Sources of Influence to Attend: Considerable differences existed in who influences continuing education students to attend classes by program areas. Practical skills, avocational, and preparatory students were influenced to attend more by college personnel, although occupational education students were influenced most by their employers. College literature was most often cited as the source of influence to attend college by academic education students.

Source of First Information About Program: The highest proportions of preparatory and avocational students received their information about the programs from college personnel, while literature from the college was cited more often by students in academic and practical skills programs. Occupational students received their information from their employers.

Reasons for Continuing Education: Continuing education students had different reasons for continuing their education. For academic, avocational, and practical skills students, their foremost reason for continuing their education was to learn more things of interest, while to earn more money was the major reason cited by students enrolled in preparatory and occupational education programs.

PART IV: SUMMARY AND CONCLUSIONS

Part IV includes two chapters which present the summary of research findings and the conclusions of this study. Chapter 9 presents a summary of research findings organized around the 15 research questions raised in Chapter 1. Chapter 10 gives the conclusions from the study and suggests some implications for practice. Several questions are raised for purposes of further reflection, discussion, implications, and research.

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Chapter 9
Summary of Research Findings

The purpose of this study of community college students enrolled in North Carolina's 58 community colleges was to examine changes in student profiles over the past 25 years, to develop an indepth knowledge base on currently enrolled students, and to examine the extent to which currently enrolled students are representative of the adult population. Fifteen research questions were formulated to serve as a guide for the development of descriptive profiles of students. Using the research questions previously stated in Chapter 1 as a guide, a summary of research findings are presented in this chapter.

RESEARCH QUESTION 1: What are the Major Changes in North Carolina Community College Student Profiles over the Past Twenty-five Years?

A primary objective of this research was to update prior studies of community college students for the purpose of detecting changes in student profiles during the past 25 years. This section presents a summary of changes in the curriculum and continuing education student profiles, as well as a summary of student enrollment changes as compared to changes in the North Carolina adult population. Indepth presentations of the changes in student profiles are found in Chapters 3, 4, and 5.

Summary of Profile Changes in the Curriculum Student Population

Trend data since 1968 show interesting shifts in curriculum student enrollments. Over the past 20 years, female enrollments in the curriculum program area have significantly increased from 32 percent in 1968 to 62 percent in 1988. Likewise, male enrollments have steadily declined from 68 percent in 1968 to a current level of 38 percent.

Following a steady increase in black enrollments through 1979, there was a four percent decrease between 1979 and 1988. White enrollments increased slightly over the past nine years.

The North Carolina Community College System is serving an increasingly diverse curriculum student population with regards to age. In 1968, three fourths of the curriculum students were 22 years of age or younger, compared to 39 percent in 1988. In 1988, 61 percent of the curriculum students were 23 years of age or older, and 39

percent were 30 years of age or older. Curriculum students are becoming older, however, there was a resurgence in the 17 and 18-year-old students in 1988.

North Carolina community colleges are serving a more highly educated clientele. Over the last 20 years, there has been a trend toward declining proportions of curriculum student enrollments among the educationally disadvantaged and correspondingly, a pattern toward increasing proportions of curriculum student enrollments among the educationally advantaged.

The percentages of curriculum students in technical programs have increased since 1968, while the percentages of vocational education student enrollments have decreased. The percentages of college transfer student enrollments have increased from 11 percent in 1979 to 19 percent in 1988.

Summary of Profile Changes in the Continuing Education Student Population

The continuing education student data over the last twenty years present trends of both increasing and decreasing enrollments. Between 1969 and 1979, the female enrollments continually increased to a high proportion of 71 percent, while the male enrollments in that same period decreased to a low proportion of 29 percent. Within the last ten years, that trend has been reversed and the female enrollments have decreased to 65 percent as contrasted to the male enrollments which increased to 35 percent.

During the last twenty years the proportions of non-white students enrolled in continuing education programs have increased, from 20 percent in 1968 to a current level of 25 percent.

Continuing education students are becoming older. Within the 30 years of age or older age category, there has been a steady increase in enrollments. There was a slight increase in the 19 or younger age category from six percent in 1979 to nine percent in 1988.

During the last twenty years, the education level of continuing education students, as well as their parents, has increased, signifying a more highly educated student population.

Summary of Student Enrollment Changes and Comparisons with the North Carolina Adult Population

Between 1979 and 1988, the female curriculum student enrollments increased in representation by seven percent, while the male continuing education student enrollments

showed gains in representation. However, female students are over-represented in both program areas and male students are under-represented.

Black curriculum students enrollments declined in representation by five percent, whereas black continuing education student enrollments were approximately equal to the black adult population. Overall, black curriculum students were under-represented, while "other" races were slightly over-represented in both program areas.

The largest gains in representation were in the 22 or younger age categories for both program areas. Within the 23-29 age group in both program areas, the largest declines in representation were observed. Curriculum students tended to be over-represented in the younger age categories and over-represented in the older age categories. The distribution of continuing education students in all age groups approximated the state adult population with minor variations.

Adults with less than a high school education were under-represented in the curriculum program area, while high school graduates and students with one to three years of postsecondary education were over-represented. Continuing education programs appear to enroll a representative cross-section of adults with regards to levels of education.

Curriculum and continuing education students appear to be approximately representative of the adult population when considering primary income. For both student groups, the executive/administrative occupational group was over-represented, whereas the sales and machine operator occupational groups were under-represented.

RESEARCH QUESTION 2: Who are the Curriculum and Continuing Education Students Being Served by North Carolina Community Colleges?

Profiles of curriculum and continuing education students are presented in this section. Representing a statistical averaging of student characteristics, these profiles may not reflect the true diversity of the students; however, they may suggest useful generalizations. Chapter 6 provides detailed research findings on the curriculum and continuing education students.

The Typical Curriculum Student

The typical curriculum student is a 29-year-old, white single female who views herself or one of her parents as the head of the household. She is a high school graduate and

may have one year of postsecondary experience. Her parents have completed high school or some postsecondary education. She works full-time, receives no financial aid, and is likely to have an annual income of less than $25,000.

This student attends college part-time and is most likely enrolled in a technical program. She attends day classes on the community college's main campus, enrolling in one to three courses. This student travels ten miles or less to class making from two to five trips to class per week. The community college she attended was her preferred institution to attend. However, if that institution did not exist she would have attended elsewhere. Her primary graduation intention is to earn an associate degree in a career program.

Her major reasons for continuing her education are to earn more money and to get a better job. She does plan to work in North Carolina.

The Typical Continuing Education Student

The typical continuing education student is a 44-year-old, white married female who lives with her spouse and children, and considers herself or her spouse as the head of the household. She is a high school graduate whose parents probably did not graduate from high school. This student is likely to be employed full-time reporting a primary income of between $10,000 and $40,000.

This continuing education student is likely to be enrolled in the occupational program area, taking one course in the evening, at an off-campus site. Enrolled in her first or second quarter at this institution, she is likely to travel five or fewer miles to class making one or two trips a week. The community college she attended was her preferred institution to attend. If that institution did not exist she would not have attended another institution. Her primary education goal is for self-enrichment and she desires to complete selected courses, but does not intend to graduate. Her major reasons for continuing her education are to learn new things of interest and to earn more money.

RESEARCH QUESTION 3: Who are the Students Enrolling in the Various Educational Program Areas?

The profile of students in the four curriculum program areas (college transfer, general education, technical education, and vocational education) and the five continuing education program areas (academic, preparatory, avocational, occupational, and practical skills education) are presented in this section. These profiles represent a statistical

averaging of student characteristics. Chapters 7 and 8 provide detailed findings on the students in the four curriculum and five continuing education program areas.

The College Transfer Student

The typical college transfer student is a 25-year-old, single white female who reports her father as the head of the household. She is likely to have some postsecondary education and her parents are high school graduates. Employed either full or part-time, her 1987 income was likely to be less than $15,000.

This college transfer student is most likely to be enrolled part-time, attending classes in the morning on the main campus and enrolled in one to three courses per quarter. She is in her first or second quarter and travels ten miles or less to attend classes. She prefers to be enrolled in a public four-year college or university. Her primary education goal is to prepare for transfer to a four-year college.

Her major reasons for continuing her education are to earn more money and to get a better job. She is likely to work in North Carolina.

The General Education Student

The typical general education student is a 33-year-old, single or married white female who designates herself or her spouse as head of the household. She is most likely to have attended a postsecondary education institution and her parents have completed high school and possibly have attended a postsecondary education institution. This student works full-time and her 1987 income is likely to be over $10,000.

A part-time student, she attends classes during the day on the main campus, enrolling in one or two courses. She may have been enrolled from one to three quarters and travels ten miles or less to class. She prefers to attend the local community college and her primary education goals are to prepare for transfer to a four-year college and for self-enrichment. Her major reasons for continuing her education are to earn more money and to learn more things of interest.

The Technical Education Student

The typical technical education student is a 30-year-old single or married, white female who reports herself or her spouse as the head of household. She is a high school graduate and may have some postsecondary education. Employed full-time, she reports a 1987 income of more than $15,000.

This part-time student attends classes in the evening or morning on the main campus and is enrolled in one or two courses. Enrolled for one to three quarters, she

travels ten miles or less to class. She prefers to attend the local community college and her primary education goals are to prepare for a different job or update and improve skills for a current job.

Her major reasons for continuing her education are to earn more money and to get a better job. She plans to work in North Carolina.

The Vocational Education Student

The typical vocational education student is a 30-year-old, white male who is likely to be single or married. He is head of the household, employed full-time, and reports a 1987 income of less than $25,000.

He is a high school graduate. A part-time student, he attends day classes on the main campus, enrolling for one or two courses. Enrolled for one or two quarters, he travels ten miles or less to class. He prefers to attend the local community college. His primary education goals are to prepare for a different job or update/improve skills for the current job and he intends to receive a diploma or certificate in a career program.

His major reasons for continuing his education are to earn more money and to get a better job. He plans to work in North Carolina.

The Academic Education Extension Student

The typical academic education extension student is a 53-year-old, married white female who lives with her spouse. She is likely to be the head of household, working full-time or having a retired status.

This academic education student is likely to have some postsecondary education. She is enrolled in one course for self-enrichment that meets in the evening at an off-campus site. The course location is within five miles of the student's residence or place of work.

The Preparatory Education Student

The typical preparatory education student is a 34-year-old, single nonwhite female. She may be the head of household and works full-time.

This student has less than an eleventh grade education. Enrolled in her first or second quarter at this institution, she is taking one course to improve basic skills that meets during the day at an off-campus site. The course location is within five miles of the student's residence or place of work.

The Avocational Education Student

The typical avocational education student is a 58-year-old, married white female who resides with her spouse. Her spouse is likely to be the head of household, while she has a retired employment status.

The typical avocational education student has graduated from high school and may have some college. Enrolled in one course for self-enrichment that meets during the day at an off-campus site, she is likely to have been enrolled for more than five quarters at this institution. The course location is within five miles of the student's residence or place of work.

The Occupational Education Student

The typical occupational education student is a 36-year-old, married white female who resides with her spouse and/or children. She is likely to be the head of household and to be employed full-time.

Enrolled in her first or second quarter at this institution, she has graduated from high school and may have some college. She is enrolled for one course to update or improve skills for her current job, that meets in the evening probably on the main campus. The course location is within ten miles of the student's residence or place of work.

The Practical Skills Education Student

The practical skills education student is a 62-year-old, married white female who resides with her spouse. She is the head of household and retired.

This student has graduated from high school and may have some college. Likely to have been enrolled for more than five quarters at this institution, she is enrolled in one course for self-enrichment that meets during the day at an off-campus site. The course location is within ten miles of the student's residence or place of work.

RESEARCH QUESTION 4: What is the Proportion of Students Enrolled in the Community College System Compared to the Proportion of the State's Population Who Are Eligible to Enroll?

This section provides a summary response regarding the extent to which community college students are representative of the North Carolina adult population. Detailed research findings are found in Chapter 5.

The study findings reveal that curriculum and continuing education programs serve disproportionate numbers of females and males. In comparison to the adult population, women were over-represented and men under-represented in both student groups. In terms of race, both curriculum and continuing education students were approximately representative of a cross-section of the state's adult population, with the exception of black curriculum students who were under-represented.

Curriculum students were not representative of the adult population in terms of age--older adults were under-represented in these programs while younger students were over-represented. Continuing education enrollments were representative of all major age groupings in the state's adult population.

Adults with less than a high school education were under-represented in the curriculum program area, while high school graduates and students with one to three years of postsecondary education were over-represented. Within the continuing education program area, students appear to mirror the education levels of the adult population.

The most over-represented occupational category among curriculum and continuing education students was executive/professional/specialty/technicians. Under-represented in both student groups were the occupational categories of sales/administrative support and operators/fabricators/laborers.

RESEARCH QUESTION 5: What Groups Are Not Being Served by the North Carolina Community College System?

When compared to the proportions in the projected 1988 North Carolina adult population, adults 40 years of age or older were under-represented among curriculum students. However, the 40-49 age category and the 50-59 age category of curriculum students showed gains in representation over the 1979 levels. Within the 60-69 age category and the 70 or older age category, the adult population increased at a faster rate than the curriculum student enrollment.

In the curriculum and continuing education program areas, females were over-represented and males were under-represented. From a representative proportion in 1979, male curriculum enrollments have decreased to the under-represented level. While under-represented in the continuing education program area, males have made gains in representation between 1979 and 1988.

Black adults are under-represented in the curriculum programs. This represents a decline in representation of five percent between 1979 and 1988.

In the curriculum program area, students at the lowest educational levels--eighth grade or less and some high school and the highest educational level--college graduate or more are under-represented. Continuing education students with an eighth grade or less educational level are under-represented.

Among curriculum students, the sales/administrative support, operators/fabricators/laborers, and service occupational categories are under-represented. Among continuing education students these two occupational categories are under-represented: sales/administrative support and operators/fabricators/laborers.

RESEARCH QUESTION 6: Which Students in What Educational Program Areas Would Least Likely Continue Their Education in the Absence of North Carolina Community College System Institutions?

Curriculum students as compared to continuing education students were more likely to have continued their education had the institution in which they were enrolled not existed. Among curriculum students, those most likely to seek educational opportunity elsewhere were college transfer and technical students.

The majority of continuing education students indicated they would not attend another institution. Of those who responded they would attend elsewhere, the largest proportions were in occupational and preparatory program areas.

RESEARCH QUESTION 7: Which Students in What Educational Program Areas Are Least Likely to Attend a North Carolina Community College as the Distance to and from Class Increases?

Seventy-three percent of the curriculum students traveled 15 or fewer miles one way to class, with 62 percent reporting they made more than two trips to class each week. Within the four curriculum programs, the estimated proportions of students who traveled various distances were similar. The lowest proportion of curriculum students who traveled distances greater than 15 miles was in the general education program.

Seventy-two percent of the continuing education students traveled ten or fewer miles one way to class; 79 percent reported they made one or two trips to class each

week. Academic education (61 percent), preparatory education (65 percent), and avocational (53 percent) students traveled five miles or less to attend classes.

RESEARCH QUESTION 8: Which Students in What Educational Program Areas Are Selecting North Carolina Community Colleges as their First Choice Over Other Forms of Post-secondary Education?

Curriculum and continuing education students cited their first preference of institution to attend was the community college they were currently attending. As their second choice, curriculum students ranked a public four-year college/university, whereas continuing education students selected another community college.

Among the curriculum programs, all program areas except college transfer selected the community college they were presently attending as the first preference of institution to attend. College transfer students ranked a public four-year college or university as their first choice of institution to attend.

Twenty-four percent of the curriculum and continuing education students enrolled in the North Carolina Community College System had been enrolled in a degree program at a four-year college or university. This reflects a one percent increase over the 1979 level of students who had previous enrollment in a four-year college.

RESEARCH QUESTION 9: What Forms of Recruitment Strategies Attract Students in Different Educational Program Areas to Attend North Carolina Community Colleges and What is the Source of First Information About Program?

The first and second sources that influenced the student's decision to attend his/her institution differed according to program area. Among curriculum students, the first sources were family members or friends while the second sources cited were institutional factors--recruiter, literature, and media. Among continuing education students, institutional factors were the first sources, followed by family members and friends.

In the four curriculum program areas, parents were cited as the primary source of most influence to attend. The institutional factors of recruiter and literature were primary influential sources in all continuing education program areas except occupational education. Employers were the most influential source for occupational education students.

Institutional factors--recruiter or other staff, literature, and media were the primary sources of first information about the program for curriculum and continuing education students. Among the institutional factors, the largest proportions of curriculum and continuing education students reported literature from the college as a key source of information, followed by college personnel.

RESEARCH QUESTION 10: Which Curriculum Students Are Receiving Financial Aid and What is the Source and Amount of That Aid?

The majority of curriculum students did not receive financial aid. Of the 23 percent who received financial aid, the largest proportions of curriculum students were in the technical and vocational education programs.

Employer tuition assistance and Pell Grants were the principal sources of financial aid for all curriculum respondents except the general education students. Veterans Administration educational benefits were the primary source of financial aid for general education students. Of the 23 percent of curriculum students who received financial aid, the largest proportion received under $700.

RESEARCH QUESTION 11: What is the Employment Status of Students?

The majority of curriculum and continuing education students were employed. Slightly less than one half of all students in both groups were employed full-time. A majority of all students were working 30 hours or more per week.

Among curriculum students, full-time employment was greatest among technical and vocational education students, and least among college transfer students. In the continuing education program areas, the largest proportion of full-time employed students was in occupational education. The retired status accounted for the majority of practical skills students.

RESEARCH QUESTION 12: Who are the Students Planning to Obtain a Bachelor's Degree and Who Holds the Degree?

A large proportion (28 percent) of the curriculum students indicated that the highest level of education they planned to obtain was the bachelor's degree. College transfer students were the most likely to plan for a bachelor's degree followed by general

education students. Only ten percent of the continuing education students indicated any plans to obtain a bachelor's degree.

Among curriculum students, the highest proportions of students who reported prior enrollment in a four-year college/university were in the general education program area followed by college transfer and technical education. Twenty-two percent of general education students reported they already held the baccalaureate, while 16 percent of all continuing education students held the degree. This indicates that a sizable number of adults are enrolling in North Carolina Community College System institutions to pursue special interests and for retraining.

RESEARCH QUESTION 13: What are the Student's Employment Plans After Completing Their Course of Study?

A majority (77 percent) of the curriculum students indicated that they planned to work in the area the college served or someplace in North Carolina, as compared to 52 percent of the continuing education students. Among curriculum students, more of the technical and vocational students plan to work in the local area served by the college. In the continuing education program area, the largest proportion of students planning to work in the area are occupational and preparatory education students.

RESEARCH QUESTION 14: What are the Major Reasons for Students Continuing Their Education?

Curriculum students gave "to be able to earn more money" and "to get a better job" as their two top reasons for continuing their education. Continuing education students ranked "to learn more things of interest" and "to be able to earn more money" as their two top reasons. These findings show a reasonable balance between the vocational-monetary and improvement-learning orientations of students. The North Carolina Community College System has maintained over the last 25 years a stated emphasis on technical, vocational, and occupational programs. Seventy-four percent of the curriculum students are enrolled in technical and vocational programs, while 38 percent of all continuing education students are in the occupational program area.

RESEARCH QUESTION 15: What are the Institutional Characteristics that Influence Students to Attend North Carolina Community Colleges?

Student rankings of institutional characteristics that most influenced their decision showed no differences between curriculum and continuing education students. Students in both curriculum and continuing education programs ranked the following five influencing factors in the order as shown: (1) educational programs or courses available; (2) location of classes; (3) low cost; (4) convenient class schedule; and (5) quality of instruction.

Chapter 10
Conclusions and Implications

The major conclusions and implications of this study of community college student characteristics are presented for the purpose of helping community college policy makers, administrators, and faculty assess the extent to which the system is positioning itself to extend opportunities to a diverse student population and to prepare a capable workforce. The North Carolina Commission on the Future emphasized that the resolution of these two issues was important in order for North Carolinians to gain the competitive edge. These conclusions and implications are based on a comprehensive study of students being served, changes in student profiles over the past 25 years, and comparisons between students enrolling in community colleges and the North Carolina adult population.

CONCLUSION 1: An enrollment revolution has occurred in North Carolina's community colleges over the past 25 years.

During the past 25 years, trustees, administrators, and faculty of North Carolina community colleges have witnessed a major transition in the numbers and types of students who enroll in the programs offered by the 58 community colleges. The typical North Carolina community college student is no longer an eighteen to 22-year-old, full-time, degree-oriented learner who has recently graduated from high school, as was the case during the early years of the system. Rather older, married, part-time students have evolved as a major force in the community college system in North Carolina over the past 25 years from 1963 to 1988.

Since 1967, enrollments in North Carolina community colleges in the curriculum and continuing education programs have increased 276 percent (North Carolina Department of Community Colleges, Annual Reports 1967-1988). In 1967 there were 25,684 curriculum students enrolled compared to 219,917 in 1988, a percentage increase of 756 percent. There were 140,415 continuing education students enrolled in 1967 compared to 404,896 in 1988, a percentage increase of 188 percent. Approximately three out of every four students in the state's higher education system is now a community college student. In 1988, 13 of every one hundred North Carolina adults were studying in credit or non-credit courses at a community college.

Women have particularly taken advantage of the educational opportunities afforded at North Carolina community colleges. As the role of women in society has changed, so too has the makeup of the North Carolina community college student body. Since

the establishment of community colleges in North Carolina, the male to female ratio in the student population has almost completely reversed. The research findings of this study and previous student profile studies showed that over the past 25 years, the proportion of female curriculum enrollments has jumped from 32 percent to 62 percent. Conversely, the proportion of male enrollments has declined from 68 percent in 1968 to 38 percent in 1988. Within the curriculum program area, state reports indicated there were 11,049 women curriculum students enrolled in 1968 compared to 127,417 in 1988, a percentage increase of 1,053 percent (North Carolina Department of Community Colleges, Annual Reports 1968-1988). Within the continuing education program area, 78,773 continuing education women students were enrolled in 1968 compared to 214,521 in 1988, a percentage increase of 172 percent. While the number of male students enrolled in both the curriculum and continuing education program areas has increased over the past 25 years, in 1988 the proportions of male students in both program areas were less than the proportions in 1968 due to the large influx of female students into community colleges.

Students in North Carolina community colleges are now more reflective of the workforce than they are of the traditional college student. In 1968, the typical community college student, like that found at most college and universities, was an eighteen to 22-year-old single male, who was living at home with his parents, working part-time, and attending college full-time. In contrast, today's students look more like the typical worker than the typical traditional college student. These students are probably in their late twenties or early thirties; are either married, separated, or divorced; live with their spouse or in some other independent living arrangement; and probably work full-time, while taking classes part-time. The following two student profiles were created from this study's research findings. In 1988, the typical curriculum community college student was a 29-year-old white single female who worked full-time, attended day classes part-time, and was enrolled in a technical program. The typical continuing education community college student was a 44-year-old white married female who lived with her spouse and/or children, was employed full-time, attended one evening class, and was enrolled in the occupational program area.

With the increase in the proportions of women students on college campuses, it is imperative that a responsive educational environment be created in North Carolina community colleges and that high priority be given to the needs and issues of women. A starting point is for community colleges to examine their policies with regard to programs and services for women. Crucial areas that need evaluation include financial aid, special services, organizational responsibility, curriculum, and counseling (Tittle & Denker, 1980; Bers, 1983). Reliable and timely information about financial aid is crucial for women students. Essential financial aid services include the availability of

loans and scholarships, part-time job referrals, and the distribution of information on financial aid. A variety of counseling programs and services are needed to address concerns related to women's issues. Counseling services should be provided by a professional and peer staff, and include orientation sessions, career development, vocational testing, and advisement. The counseling staff may need to provide women with support, information, and advice concerning the impact of their families upon the student role and how to deal with difficulties. Women students will need personal and career counseling that includes how to seek a job. Special services needed by women may include child care, health care, flexible schedule of classes, and accessible course locations. Many of these special needs and concerns may also apply to men and more attention needs to be given to these concerns.

Brownlee (1990) concluded that women students comprised a majority of North Carolina community college students and revealed considerable diversity in age, social and ethnic backgrounds, roles, goals, and life experiences. The existence of a diverse women student population implies that community college administrators, counselors, and faculty need to recognize that diversity within their college and be aware of its impact. Community college leaders need to design programs and support services that meet the unique needs of the different subpopulations within the total women student body. Older women students have characteristics that set them apart from the women students in the 18 to 24-year-old age group. Women who are heads-of-household and working full-time will have different financial needs than a married woman whose husband is employed as an executive. Women students who have lower levels of educational attainment have characteristics that differ from women who have attended a four-year college before enrolling in a community college. Black women who are entering community colleges with lower levels of education may have special needs. A recent study found that in North Carolina community colleges black women are enrolled in the largest proportions in the lowest status curriculum and continuing education programs, which represents a need for remediation, tutoring, academic advising, and specialized counseling (Brownlee, 1990).

Community college trustees, administrators, and faculty may need to receive speciál training on the changing role of women in society and in the workplace during the 1990s. The mature adult woman may need special courses, workshops, and counseling to help resocialize her to the norms of the workplace. According to the literature, most women continue to enroll in traditionally feminine occupations; therefore, women students may need additional counseling to explore opportunities for careers in nontraditional work roles (Brownlee, 1990; Gittell, 1986; West, 1981). While the majority of administrators, policy makers, and faculty continue to be male, attention

needs to be given to the concern of whether the role model needs of women students are being met by community college leaders.

With the increased proportions of older community college students, it is necessary to be alert to the unique needs of adult learners when planning curriculum and continuing education programs. Programs and courses need to be flexible, reflecting the interests of older adults. Scheduling courses at convenient times and in accessible locations should be a high priority for institutional planners.

CONCLUSION 2: When viewed against the backdrop of the state's increasing technological demands in the economy, it appears that North Carolina's community colleges are contributing to the development of a new technology-based work force. However, declining enrollment trends in traditional vocational fields raise some questions regarding the education of tomorrow's skilled craftspersons.

While there has been an enrollment revolution in North Carolina's community colleges over the past 25 years, one enrollment trend has not changed. Most students continue to enroll in career related programs. North Carolina community colleges continue to be the state's principal vehicle for adult basic, technical, and occupational education and for the dissemination of new technology to industry (Commission on the Future of North Carolina Community Colleges, 1989). Over the past 25 years, the North Carolina Community College System has maintained a stated emphasis on technical, vocational, and occupational education programs. Seventy-four percent of the curriculum students were enrolled in technical and vocational programs, while 47 percent of all continuing education students were enrolled in the occupational or practical skills program areas. Curriculum students reported "to be able to earn more money" and "to get a better job" as their two top reasons for continuing their education. Continuing education students ranked "to learn more things of interest" and "to be able to earn more money" as their two top reasons. In 1988, three fourths of the curriculum and over one half of the continuing education students were employed either full-time or part-time. North Carolina community college students exhibited an integrated pattern of working and learning, as most students are working and attending college to meet occupation-oriented educational goals.

Over the past 25 years, there has been a steady decline in the proportions of students enrolled in vocational education programs. In 1968, 29 percent were enrolled in vocational education as compared to 16 percent in 1988. In technical education programs there has been an increase in the proportions of students enrolled from 47 percent in 1968 to 58 percent in 1988.

We can address the gap between people and jobs by attracting more adults into the labor force, training them to meet the standards of the changing economy, and by upgrading the skills of the current workforce (Commission on the Future of North Carolina Community Colleges, 1989). The community college is in a strategic position to capitalize on providing competent workers for the future. As present skills are becoming obsolete due to rapidly changing conditions, lifelong, continuous re-skilling of the workforce will become a national priority (Braden, 1987). Predictions indicate there will be no shortage of jobs in the year 2000; however, there will be a shortage of qualified people for those jobs.

More attention needs to be given to the needs and demands of the new technology-based workforce which community colleges are dedicated to serving. The community college mission must be flexible enough to mold its emphasis around the needs of the local community. The community college needs to expand its influence by providing greater linkage between high schools; business and industry; and colleges and universities. Improved articulation between these organizations would result in less duplication of effort and more efficiency. Out of such collaboration, strategic planning would enhance specific actions to bolster particular program areas, while limiting or even phasing out other program areas. It is believed that this collaboration would provide a higher-quality education for the new technology-based workforce.

Parnell (1990) suggested that most community colleges will soon have some kind of special employer-college liaison office. He indicated that the associate degree will become a more important credential for meeting the technical workforce needs of employers. More attention needs to be given to technical workforce incubators, centers of excellence, and think tanks as strategies to facilitate innovation and renewal. Parnell further concluded that a new and integrated 2 + 2 + 2 tech-prep/associate degree/bachelor of technology degree program will become commonplace in schools and colleges by the year 2000. These developments look promising for the growing technical student enrollments in community colleges. However, what about the declining student enrollments in the vocational programs? Where will the skilled craftspersons be trained for tomorrow's workforce? Will they be trained by employers? What is the role of community colleges in helping with this training? Again, the key issue is to what extent are community colleges positioning themselves for building a capable workforce?

CONCLUSION 3: North Carolina community colleges serve most segments of the adult population through comprehensive educational programs and services with some exceptions.

To determine the extent to which North Carolina community colleges serve most segments of the state's adult population, comparisons were made between census projections of the adult population and selected demographic and socioeconomic characteristics of the students in the study sample. These comparisons indicated that the colleges served a larger proportion of women students than existed in the state's adult population. The state's adult population was approximately 54 percent female and 46 percent male, whereas the colleges' enrollment of female students was 62 percent for curriculum and 65 percent for continuing education students.

In terms of race, both curriculum and continuing education students were approximately representative of a cross-section of the state's adult population, with the exception of black curriculum students who were under-represented. Between 1979 and 1988, there has been a decline in representation of five percent among black adults in the curriculum program area.

Overall, community colleges enrolled a smaller proportion of students who had less than a high school education than existed in the state's population. At least 96 percent of the students enrolled in the curriculum programs had a high school education or more, as compared to 69 percent of the continuing education students and 68 percent of the state's adult population. Continuing education programs appeared to enroll a representative cross-section of adults with regards to levels of education. Students enrolled in curriculum programs are not representative of the adults in North Carolina with regards to levels of education.

Curriculum and continuing education students appeared to be approximately representative of the adult population when considering primary income. The major exception was among the 13 percent of continuing education students who had primary annual income of less than $5,000, as compared to five percent of the state's adult population.

In terms of age, the colleges enrolled a larger proportion of younger adults as compared to the North Carolina adult population. This pattern was especially true among curriculum students. Conversely, the continuing education students were quite representative of the adult population in terms of age categories.

Although, in general, community colleges serve a cross-section of North Carolina's adult population, specific differences existed within each program area. Women outnumbered men in the college transfer, general, and technical education programs, although men outnumbered women in the vocational education programs. The largest proportion of white students was enrolled in the college transfer program, whereas the largest proportion of black students was enrolled in vocational education programs. The general education program attracted older students; the college transfer program attracted younger students. The career-oriented students, in contrast to college transfer students, were from lower socioeconomic status families.

One of the major tenets of the egalitarian community college system is the belief that community colleges should and actually do serve diverse persons within their service areas (Templin, 1976). North Carolina community colleges do an outstanding job of being the "people's colleges," when the student profiles for all community college students are considered together. The total student body characteristics reflected the general adult population on several variables. As North Carolina community colleges strive to provide educational opportunities to a cross-section of the adult population, the continuing education program area is essential to achieving that goal. However, when examining specific programs, student enrollments are not always representative. The data from this study and previous studies suggest a trend toward enrolling students from higher socioeconomic status populations. Tuition costs and other expenses may be a factor here. More attention needs to be given to this trend. Community colleges must improve their effectiveness in recruiting students who have less than a high school education if they are to position themselves for extending opportunities to a diverse population and to develop a more capable workforce.

CONCLUSION 4: There continues to be a persistent gap between North Carolina's community college enrollments and some at-risk groups including low income, low skilled, and educationally disadvantaged people.

The North Carolina Commission on the Future reported that "too few of the adults most in need of community college education are recruited, enter, progress through, and graduate from the system" (p. 13). This profile study indicated that while there are some signs of increased representation for the educationally at-risk population, overall community colleges are serving an increasingly better educated group of adult citizens.

In this study the extent to which North Carolina community colleges are succeeding in serving the adults of North Carolina was examined by investigating enrollment trends in relation to the North Carolina adult population trends. Changes in

the overall representativeness of students must take into account adult population changes in order to evaluate the college's ability to serve a particular segment of the adult population. The representation index was utilized which described the overall representativeness of selected students when the changes in the North Carolina adult population were taken into account.

Gains in representation were observed for community college students with less than a high school diploma in the curriculum and continuing education programs. Between 1979 and 1988, the proportions of North Carolina adults with less than a high school diploma have decreased from 55 percent to 32 percent. The North Carolina Community College System has played a significant role in reducing the proportion of adults who do not have a high school diploma. Among community college students enrolled with less than a high school diploma, there were percentage decreases in the curriculum and continuing education program areas except for curriculum students with some high school. The decreases in the state adult population with less than a high school diploma were greater than the decreases in the community college students enrollments with less than a high school diploma in both program areas, therefore a gain in representation resulted. However, it must be noted that while the continuing education programs have enrolled impressive proportions of students with an eighth grade or less and students with some high school, the enrollment of students with the lowest levels of education are very under-represented in curriculum programs.

Over the past 25 years, the findings suggest that North Carolina community colleges are serving a more highly educated clientele. There has been a trend toward declining curriculum student enrollments among the educationally disadvantaged. Adults with less than a high school education were under-represented in the curriculum program area, whereas high school graduates and students with one to three years of postsecondary education were over-represented. Twenty-four percent of the currently enrolled curriculum and continuing education students had been previously enrolled in a degree program at a four-year college or university. Among continuing education students and their parents, the attained education level has increased, while continuing education students with an eighth grade or less educational level are under-represented.

The evidence suggest that community colleges in North Carolina may be becoming middle-class institutions. Based on this study and previous studies, North Carolina's community colleges are enrolling students with higher socioeconomic backgrounds. With the push for higher quality education and greater institutional effectiveness, coupled with a larger number of educationally advantaged students, there is a likelihood that lower socioeconomic students will continue to be under-represented unless some major changes are made.

There is a continuing need to enroll and train more at-risk students. At the 1989 American Association of Community and Junior Colleges conference President George Bush stated,

> *We share the conviction that there is no such thing as an expendable student. We will never accept the notion that vast numbers of illiterate and undereducated Americans can be offset by a well-educated elite. That's not the American way. (Parnell, 1990, p. 101)*

By the year 2000 there will be a significant shortage of qualified workers to fill available jobs. As Parnell (1990) suggested there will be the twin problems of a surplus of at-risk individuals and a shortage of skilled workers. These individuals are at-risk in terms of their own lives and they create a risk for our society. The future economic strength depends on the at-risk population being contributing members to the workforce. Community colleges cannot afford to sit on the sideline. Success must be experienced in enrolling and training the at-risk population.

Richardson and de los Santos (1988) suggested that colleges need to announce their priorities and back the priorities with dollars to recruit, retain, and graduate at-risk populations. Minority leaders need to be employed in senior leadership positions to send a clear message that cultural diversity is valued. Tracking achievements of the at-risk students will be essential. Comprehensive support services will need to be provided and especially, financial aid. Quality must be emphasized. Colleges must reach out to community schools, agencies, and businesses. We must bridge educational gaps by extending classes to cover required material. Other bridge programs include tutoring, learning laboratories, collaborative study groups, and intensive advising. Colleges must reward good teaching characterized by caring, mentoring, sensitivity to cultural differences, and high expectations for all students. Administrators need to recruit a diverse faculty and, in general, construct a nonthreatening social environment.

CONCLUSION 5: North Carolina community colleges are increasingly serving a more diverse student population.

Over the past 25 years, the student population has become more diverse with regard to age. In 1968, three fourths of the curriculum students were 22 years of age or younger, as compared to 39 percent in 1988. Likewise, within the continuing education student enrollments, there has been a steady proportional increase in students 30 years of age or older. While the findings indicate that overall the age of the student body is increasing, there was a resurgence in the 17 and 18-year-old curriculum students in

1988, as well as a slight increase in the 19 or younger aged continuing education students.

Over the past 25 years, the student population has become more diverse with regard to type of residence while enrolled. Whereas the majority of curriculum students resided with parents in 1968, in 1988 thirty-four percent resided with parents, 39 percent with a spouse, and 26 percent had some type of independent living arrangement. In 1968 the majority of curriculum students were single, whereas in 1988 only 48 percent were single and 52 percent were married, separated, widowed, or divorced.

In 1968, curriculum students tended to be enrolled full-time attending day classes. In 1988, more curriculum students were attending evening classes and were enrolled on a part-time basis. More continuing education students were attending classes during the day in 1988 as compared to 1969.

Currently, the diversity among the students was evident with regard to age, marital status, and educational background. The average age of all students was 34 years of age, and the ages of students ranged from 16 to 90. Forty-five percent of the students were under 30 years of age, and 21 percent were over 50 years of age. Whereas 48 percent of the students were married, 35 percent were single, never married. The students being served had diverse education backgrounds, with 18 percent reporting less than a high school education and 12 percent being college graduates. Some students were non-readers, although others held advanced degrees. Fifty-four percent of the students had a high school education or less; 40 percent had more than a high school education.

The diversity of the students was also reflected in their enrollment in educational programs. Substantial differences between curriculum and continuing education students were found with regard to many of the variables examined in this study. Furthermore, there were major differences by program areas within the curriculum and continuing education program areas. The college transfer student was most like the traditional college student, with 50 percent being 22 years of age or less, whereas 65 percent of the occupational education students were 30 years of age or older. With regard to primary educational goals, 68 percent of the continuing education students did not intend to complete a degree program, although 35 percent of the curriculum students intended to earn an associate degree in a career program.

Some traditional responses by institutions for diversity have focused on student assistance--addressing the particular needs or problems felt to be barriers to students' success. Other institutions have made efforts at institutional accommodations,

acknowledging that some of the barriers for success rest with the institution. Smith (1989) suggested that an even broader effort is the capacity of the institutions to "organize for diversity." In the face of such a diverse student population in North Carolina community colleges, administrators and faculty must prepare themselves to educate a pluralistic population which is part of a pluralistic society. If the needs and interests of diverse students are to be met, North Carolina community colleges must organize for diversity.

With older students enrolling in higher proportions, community colleges may need to give more emphasis to faculty development and continuing education, particularly in the area of developmental tasks throughout the lifespan. Community college administrators and faculty need to be sensitive to the unique needs of adults as learners. In the past, educators were oriented to teaching younger students who were preparing for adult life. The findings of this study suggest that community college students are adults with job and family responsibilities, who are attending school on a part-time basis. Curricular designs, instructional strategies, and support services need to be developed and implemented within a framework of adult development and lifelong learning, rather than traditional adolescent psychology. Additionally, faculty and administrators may need to examine the role of "teacher" in the teaching/learning relationship with the mature adult learner. As Gibb (1960), Knowles (1980), Brundage and Mackeracher (1980), and Smith (1982) suggested, adults are more interested in solving problems than they are in learning subject matter. As a rule, adults like their learning activities to be problem centered, to be meaningful to their life situation, and they want the learning outcomes to have some immediacy of application (Brookfield, 1986). Likewise, mature learners will be more independent than their younger counterparts, and they will want to integrate their learning with their previous experience. The instructor will need to be more of a resource person or facilitator of learning and less of a transmitter of knowledge. Programs, curricula, and the sequences of courses need to be flexible to accommodate the adult learner. Likewise, with more experienced, working, part-time students, faculty may need to be retrained in the state-of-the-art technology in business and industry.

The Commission on the Future of North Carolina's Community College has done a commendable job of reaffirming North Carolina's commitment to offering training in basic and technical skills to all of its people--in all their diversity. Appropriate challenges have been made to upgrade the quality of community college faculty, staff, administrators, and programs. Efforts are being focused on implementing the Commission's recommendations over the next several years. To support these efforts, requests for more adequate funding have been made to the North Carolina General

Assembly. More money is needed if these colleges are to become more effective instruments for educational and economic development in North Carolina.

CONCLUSION 6: North Carolina's community colleges serve primarily their local communities and provide postsecondary educational opportunities to people who otherwise would not attend college.

Curriculum and continuing education students cited their first preference of institution to attend as the community college they were currently attending. Curriculum students ranked a public four-year college/university as their second choice of institution to attend, whereas continuing education students selected another community college.

In 1988, more than four fifths of all curriculum students were attending an institution located in their home county. The research findings suggested that most students lived or worked near the place where they attended classes. Seventy-three percent of the curriculum students traveled 15 or fewer miles one way to class, whereas 72 percent of the continuing education students cited they traveled ten or fewer miles one way to class. Eighty-one percent of curriculum students were attending classes on their institution's main campus.

Most community college students lived and worked in the geographical area of the community college they attended, and most planned to continue to live and work in the service area of the local college. The geographical location of the community college or its satellite campuses is very important to the community college student. The evidence shows that adult students do not travel long distances to attend classes.

When the preferences and the ages of students, as well as the distances traveled to class and the location of classes are examined, North Carolina community colleges appear to be meeting major local educational needs of adults who live in the immediate service area. These community-based institutions play a major role in providing educational opportunities for North Carolinians. Students reported they attended these colleges because of the educational programs or courses available, the location of classes, the low cost, the convenient class schedule, and the quality of instruction. Given the adult roles of the majority of community college students, it is likely that these institutional characteristics will continue to be key influences in future students' decisions to attend.

Most of the study respondents were comfortable and satisfied with their decision to attend their local community college. Approximately one half of all community

college students would not have attended another college if their community college had not existed. This group represented approximately one third of the curriculum students and two thirds of the continuing education students. Further indication of their satisfaction was provided by 98 percent of the study respondents who reported they would recommend their college to a friend. This evidence clearly indicates these institutions are serving and building their local communities and providing postsecondary educational opportunities to people who otherwise would not attend college.

The findings suggest that community colleges provide a very important opportunity for citizens of North Carolina and their respective communities. Every effort needs to be made to expand the availability of educational programs to more communities in North Carolina rather than to reduce the number of colleges. If the number of colleges were reduced then more satellite campuses would be needed to make educational opportunities available. Adults who are working and going to school part-time with family responsibilities are not likely to travel more than 15 to 20 miles to attend classes. All 58 colleges are not located within commuting distance for many adults who need to be enrolled in classes. It appears that all adults do not have equal opportunities for access to what these colleges have to offer. If the system intends to extend opportunities to a more diverse student population, then classes will need to be more accessible both geographically and economically.

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PART V: APPENDICES

Part V includes eight sections which may be used by the reader to further understand and interpret the technical aspects of the study. Additionally, these appendices may prove helpful to future researchers, specifically those involved in large systemwide survey research projects.

The appendices are as follows: (A) Enrollment Projections and Allocated Sample Sizes for Colleges in the North Carolina Community College System, Fall Quarter, 1988; (B) College Research Coordinators; (C) Workshop Locations and Dates; (D) Procedures for Drawing the Sample; (E) Actual Sample Sizes and College Response Rates; (F) Research Survey Instrument; (G) Pretest Findings and Reliability of Research Instrument Responses; and (H) Expansion Factors.

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Appendix A: Enrollment Projections and Allocated Sample Sizes for Colleges in the North Carolina Community College System, Fall Quarter, 1988

Enrollment Projections

Enrollment projections for the fall quarter, 1988, were calculated for each of the 58 colleges in the North Carolina Community College System. The enrollment projection formula was:

Change in enrollment, Fall 1987 to Fall 1988 = (A + B)/ 2

A = percent change from Fall 1985 to Fall 1986

B = percent change from Fall 1986 to Fall 1987

Enrollment percentage changes for previous fall quarters, 1985 to 1986, and 1986 to 1987, were calculated. By using the actual unduplicated enrollment figures provided by the North Carolina Department of Community Colleges for the fall quarters of 1985, 1986, and 1987, it was possible to compute an enrollment percentage change. The sum of these two enrollment percentage changes was averaged to generate a percentage which would approximate the expected change between fall quarters, 1987 and 1988.

The enrollment projection formula was used to detect changes in the curriculum and continuing education program areas. Separate enrollment projections were established for both program areas. The sum of these two projections constituted the total enrollment projection for a specific college.

Sample Selection Methodology

Two major objectives of this study were (a) to provide a profile of the students enrolled in all 58 colleges of the North Carolina Community College System, and (b) to provide each participating college with a profile of the students enrolled in their respective curriculum and continuing education program areas.

To ensure a representative and accurate picture of the students in any given college within the system, a sample of sufficient size must be taken. An assumption was made that all colleges participating in the study should receive information on their students that is equally precise and accurate. Based on time considerations, resources available to conduct the study, and the general size of the project, it was determined that all schools should receive data that is, at a minimum, accurate to within (+ -) 3.5% of an estimated population value. This accuracy should have a 0.68 probability of being true.

In conjunction with Dr. Charles Proctor, Department of Statistics, NCSU, a formula for sample size was selected that allowed the desired degree of precision, accounted for the effects of sampling clusters or classes, and adjusted for variations in the sizes in the colleges. As a result, those colleges participating in the study could expect: (a) information that was comparable to the information obtained by the other colleges in terms of precision, (b) information that accounted for the effects introduced by sampling whole classes, and (c) a sample size that reflected the size of the college.

When the data from all of the participating colleges were combined to obtain an over-all profile of the North Carolina Community College System, it was proposed that the resulting information would be extremely accurate and precise with an expected error of less than one percent, 95% of the time.

Projected Enrollment and Allocated Sample Size for Each Participating College, Fall 1988

College	Enrollment Projection	Allocated Sample Size
ALAMANCE CC	7,191	367
ANSON CC	2,027	324
ASHEVILLE-BUNCOMBE TCC	6,335	361
BEAUFORT COUNTY CC	3,026	335
BLADEN CC	1,784	321
BLUE RIDGE CC	3,818	343
BRUNSWICK CC	1,660	319
CALDWELL CC & TI	5,299	354
CAPE FEAR CC	4,408	348
CARTERET CC	3,191	337
CATAWBA VALLEY CC	5,638	357
CENTRAL CAROLINA CC	5,927	359
CENTRAL PIEDMONT CC	22,211	432
CLEVELAND CC	3,021	335
COASTAL CAROLINA CC	6,818	364
COLLEGE OF ALBEMARLE	3,449	339
CRAVEN CC	3,257	338
DAVIDSON COUNTY CC	4,702	350
DURHAM TCC	7,038	366
EDGECOMBE CC	2,726	332
FAYETTEVILLE TCC	17,101	414
FORSYTH TCC	8,538	375
GASTON COLLEGE	5,963	359
GUILFORD TCC	14,151	402
HALIFAX CC	2,987	335
HAYWOOD CC	1,813	321

Projected Enrollment and Allocated Sample Size for Each Participating College, Fall 1988

College	Enrollment Projection	Allocated Sample Size
ISOTHERMAL CC	4,364	347
JAMES SPRUNT CC	1,585	318
JOHNSTON CC	5,833	358
LENOIR CC	4,678	350
MARTIN CC	1,776	321
MAYLAND CC	1,522	317
MCDOWELL TCC	742	301
MITCHELL CC	3,380	339
MONTGOMERY CC	1,594	318
NASH CC	3,392	339
PAMLICO CC	415	285
PIEDMONT CC	2,078	325
PITT CC	5,181	353
RANDOLPH CC	5,001	352
RICHMOND CC	3,041	335
ROANOKE-CHOWAN CC	1,854	322
ROBESON CC	3,930	344
ROCKINGHAM CC	3,159	337
ROWAN-CABARRUS CC	8,060	372
SAMPSON CC	2,411	329
SANDHILLS CC	5,199	354
SOUTHEASTERN CC	2,754	332
SOUTHWESTERN CC	2,121	325
STANLY CC	3,849	343
SURRY CC	4,094	345
TRI-COUNTY CC	1,699	320
VANCE-GRANVILLE CC	4,124	345
WAKE TCC	13,472	399
WAYNE CC	5,192	353
WESTERN PIEDMONT CC	4,499	348
WILKES CC	4,532	348
WILSON COUNTY TC	3,804	342
Total	273,414	20,003

Appendix B: College Research Coordinators

The president of each of the 58 colleges that participated in this study appointed a staff member to serve as a college research coordinator. The coordinators, listed by college, were the following:

ALAMANCE CC	Mr. Bill Paris
ANSON CC	Ms. Anna Baucom
ASHEVILLE-BUNCOMBE TCC	Mr. Jack Davis
BEAUFORT COUNTY CC	Ms. Sue Brookshire
BLADEN CC	Mr. James Oxendine
BLUE RIDGE CC	Ms. Jacque Beddingfield
BRUNSWICK CC	Ms. H. Elizabeth McLean
CALDWELL CC & TI	Mr. Tony Deal
CAPE FEAR CC	Mr. Chris Zingelman
CARTERET CC	Ms. Gale Swann
CATAWBA VALLEY CC	Dr. Donald Altieri
CENTRAL CAROLINA CC	Mr. Larry Hamilton
CENTRAL PIEDMONT CC	Mr. John Quinley
CLEVELAND CC	Mrs. LouAnn Bridges
COASTAL CAROLINA CC	Mr. Charles Lancaster
COLLEGE OF ALBEMARLE	Ms. Clate Aydlett
CRAVEN CC	Ms. Deborah Hunter
DAVIDSON COUNTY CC	Mr. Edwin Morse
DURHAM TCC	Dr. Jackson Butler
EDGECOMBE CC	Mr. Thomas Anderson
FAYETTEVILLE TCC	Ms. Ruth Hankins
FORSYTH TCC	Mr. Charles King
GASTON COLLEGE	Ms. Carol Harbers
GUILFORD TCC	Mr. Ed Knight
HALIFAX CC	Mr. Ray Barmer
HAYWOOD CC	Mr. L. Dean McMahon
ISOTHERMAL CC	Ms. Kelly Ashley
JAMES SPRUNT CC	Mr. Michael Fortner
JOHNSTON CC	Ms. Julia McCullers
LENOIR CC	Mr. Bud Vick
MARTIN CC	Ms. Peggy Cherry
MAYLAND CC	Ms. Suzanne Ledford
MCDOWELL TCC	Mr. Jim Biddix
MITCHELL CC	Ms. Phyllis Bailey
MONTGOMERY CC	Mr. Phillip Kissell

NASH CC	Mr. Robert Semple
PAMLICO CC	Mr. John Jones
PIEDMONT CC	Mr. Joseph Moorefield
PITT CC	Dr. Edgar Boyd
RANDOLPH CC	Ms. Carol Elmore
RICHMOND CC	Ms. Terri Jacobs
ROANOKE-CHOWAN CC	Mr. Robert Sessoms
ROBESON CC	Mr. Mark Kinlaw
ROCKINGHAM CC	Dr. Robbie Needham
ROWAN-CABARRUS CC	Mr. Colin Shaw
SAMPSON CC	Ms. Linda Faircloth
SANDHILLS CC	Ms. Iris Brown
SOUTHEASTERN CC	Mr. Bob Young
SOUTHWESTERN CC	Ms. Sibyl Reed
STANLY CC	Ms. Dianne Burton
SURRY CC	Dr. Sherry Madison
TRI-COUNTY CC	Mr. John Bandy
VANCE-GRANVILLE CC	Mr. Frank Madigan
WAKE TCC	Mr. Ed Silvey
WAYNE CC	Mr. Jim Thomas
WESTERN PIEDMONT CC	Ms. Billie Meeks
WILKES CC	Mr. Larry Caudill
WILSON COUNTY TC	Ms. Janet Betts

Appendix C: Workshop Locations and Dates

September 16, 1988	Central Piedmont Community College Charlotte, North Carolina
September 19, 1988	Asheville-Buncombe Technical C.C. Asheville, North Carolina
September 20, 1988	Wilkes Community College Wilkesboro, North Carolina
September 26, 1988	Cape Fear Community College Wilmington, North Carolina
September 27, 1988	Pitt Community College Greenville, North Carolina
September 28, 1988	Wake Technical Community College Raleigh, North Carolina
September 30, 1988	Randolph Community College Asheboro, North Carolina

Appendix D: Procedures for Drawing the Sample

One of the tasks of the college coordinator was drawing the sample for their college. A major portion of the coordinator's workshop was devoted to a discussion and exercise related to this task. A copy of the completed sampling worksheets and total class lists were sent to the research team at North Carolina State University, where the sampling process was checked for accuracy. The following procedure was used in selecting the sample from each college. These instructions were presented at the workshops and incorporated into the college research coordinator's manual. The page numbers listed reference the manual.

How to Draw the Sample of Classes For Your College

A. Prepare the Total Class List

1. Secure a copy of your Institution's Class Report for this quarter which shows all curriculum classes with enrollment per class. If this list is not available, call NCSU project staff.

2. Secure a list of all continuing education classes which will be in operation during the seventh week of the fall quarter, with enrollment per class. If you cannot get exact enrollments for extension classes, ask Extension/ Continuing Education to give you an estimate of average class size.

3. Combine the curriculum and continuing education class lists into one TOTAL CLASS LIST with enrollment per class. You do not need to retype the lists, just combine so that you can work with the one TOTAL CLASS LIST. This TOTAL CLASS LIST is your sampling frame. It is very important to the representativeness of this project that it be as complete and correct as possible. Remember in combining the two lists, that the curriculum list is first, with the continuing education list following.

4. Number all classes on your TOTAL CLASS LIST from "1" to however many classes you have. This number is called the "total class list number."

5. Add the enrollment per class for all classes to get a sum (one number). This number is called the DUPLICATED HEADCOUNT for your college. This number for your college is _____.

B. Figure the Number of Classes in Your Sample

6. Use the following information to calculate the number of classes your sample will include.

Number of classes on the TOTAL CLASS LIST A = _____

Desired sample size for your college B = _____

This number is obtained from DESIRED SAMPLE SIZES FOR EACH COMMUNITY COLLEGE, pg. 24.

DUPLICATED HEADCOUNT from step 5 above, C = _____
Use these figures in the following equation to get:

Number of classes in sample for your college = D.

To calculate the number of classes which will be needed for your sample use the following equation.

$$D = \frac{(B \times A)}{C}$$

If you do not get a whole number for your answer, round up to the next highest whole number. For example, if your answer is D = 6.13 you would round up to D = 7. Verify your figures and then transfer them to the corresponding designation on the SAMPLING WORK SHEET, pg. 22.

C. Choosing the Classes For Your Sample

7. Calculate the SAMPLING GAP, G. Use the numbers you have calculated in Step six.

$$\frac{A}{D} = G$$

In the calculation of the sampling gap use 2 decimal digits. Do not round up to the next highest whole number.

8. You are now ready to select classes from your TOTAL CLASS LIST. To select the first class to be included in your sample use the TABLE OF RANDOM NUMBERS which has been taped onto the SAMPLING WORK SHEET, pg. 22. If there are 99 or fewer classes on your TOTAL CLASS LIST, you will use a 2-digit number from the

random number table. If there are 100 classes or more on your TOTAL CLASS LIST, you will use a 3-digit number.

DEFINITIONS: IN-RANGE NUMBER--A 2 or 3 digit number observed on the TABLE OF RANDOM NUMBERS which is equal to or less than the total number of classes at your college. OUT-OF-RANGE NUMBER--A 2 or 3 digit number observed on the TABLE OF RANDOM NUMBERS which is greater than the total number of classes at your college.

HOW TO USE THE RANDOM NUMBER TABLE: Start with the first random digit in the upper left corner of the Table. If you need two digits use the first two. If you need three, use the first three. If the number is out-of-range, then cross the digits out and use the next 2 or 3 random digits in order. Ignore the spacings and row changes between sets of five digits; the table is just one long string of random numbers. Continue reviewing 2 digit or 3 digit numbers until you have an in-range number. Write the in-range random number on the SAMPLING WORK SHEET, pg. 22.

EXAMPLE OF HOW TO USE THE RANDOM NUMBER TABLE: Suppose you have 382 classes and the random numbers are "41771 78761 84513 47052," etc. Review the random numbers in 2 or 3 digit sequence. The first in-range number you come to is 184.

9. Look at the column on your list in which you numbered your classes from "1" to however many there are. This column is made up of the "total class list numbers." Locate the "total class list number" which is the same number as the random number you have chosen.

The SAMPLING WORK SHEET, pg. 22, will be used as a record of the classes which will be included in your sample. Beside the CLASS NUMBER IN SAMPLE 01 write the "total class list number", the class title, and course number. For your convenience and administration, columns have been included for Time/Day and Location. When you have completed this step you have chosen the first class in your sample.

10. Add the SAMPLING GAP (Step 7) to the "total class list number" of your first class. From this obtained number you will round off to receive a whole number which is called the CHOSEN CLASS. This will identify the second class in your sample. On the SAMPLING WORK SHEET, pg. 22, beside CLASS NUMBER IN SAMPLE 02, complete the needed information. Continue adding the SAMPLING GAP until you have selected as many classes as your sample requires (Step 6). Continue to complete the needed information on the SAMPLING WORK SHEET, pg. 22.

You will probably reach the end of your TOTAL CLASS LIST before you have selected all the classes needed for your sample. When this happens, just subtract

the total number of classes from the last calculated number (with two decimal digits). This will start you back near the beginning of your list.

EXAMPLE: Referring to the example listed in (8) assume that the SAMPLING GAP is "27.29" and that D = 14 (number of classes in the sample for your college). Beginning with the first total class list number of 184, chosen from the random number table, you would keep adding "27.29" as in the following example.

CLASS NUMBER IN SAMPLE		ADDING SAMPLING GAP	CHOSEN CLASS
01		184	184
		+ 27.29	
02		211.29	211
		+ 27.29	
03		238.58	239
		+ 27.29	
04		265.87	266
		+ 27.29	
05		293.16	293
		+ 27.29	
06		320.45	320
		+ 27.29	
07		347.74	348
		+ 27.29	
08		375.03	375
		+ 27.29	
		402.32	(Over the total number of classes)
	Subtract	382.00	(Number of classes)
09		20.32	20
		+ 27.29	
10		47.61	48
		+ 27.29	
11		74.90	75
		+ 27.29	
12		102.19	102
		+ 27.29	
13		129.48	129
		+ 27.29	
14		156.77	157

This process should cycle you through your entire TOTAL CLASS LIST.
CHECK: Add 27.29 to the last two decimal number obtained.

156.77 + 27.29 = 184.06

This number rounds to 184 which is the number of the first chosen class at 01.

184

Sampling Work Sheet

A = TOTAL NUMBER OF CLASSES: _____

B = DESIRED SAMPLE SIZE: _____

C = DUPLICATED HEADCOUNT: _____

D = NUMBER OF CLASSES IN YOUR SAMPLE:

D = (B x A) / C

(___x___) /_____ _____

G = SAMPLING GAP:

G = A / D _____

RANDOM NUMBER SELECTED _____

SAMPLE FORM: Classes Selected For Sample

Class Number In Sample	Chosen Class	Class Title & Course Number	Time/Day	Location
01				
02				
03				
04				
05				
06				
07				
08				

Appendix E: Actual Sample Sizes and College Response Rates

College	(a) Actual Sample	(b) Usable Questionnaire N	%	(c) Nonrespondents Absent	Refused	Other
ALAMANCE CC	305	247	81	35	6	17
ANSON CC	317	248	78	67	2	0
ASHEVILLE-BUNCOMBE TCC	449	326	73	102	8	13
BEAUFORT COUNTY CC	355	299	84	53	3	0
BLADEN CC	286	259	91	27	0	0
BLUE RIDGE CC	390	330	85	52	8	0
BRUNSWICK CC	309	239	77	66	3	1
CALDWELL CC & TI	308	258	84	48	0	2
CAPE FEAR CC	306	255	83	51	0	0
CARTERET CC	357	311	87	33	11	2
CATAWBA VALLEY CC	316	249	79	67	0	0
CENTRAL CAROLINA CC	357	318	89	37	0	2
CENTRAL PIEDMONT CC	471	360	76	102	8	1
CLEVELAND CC	321	270	84	49	0	2
COASTAL CAROLINA CC	378	327	87	49	2	0
COLLEGE OF ALBEMARLE	397	335	84	61	1	0
CRAVEN CC	318	270	85	41	0	7
DAVIDSON COUNTY CC	339	272	80	61	6	0
DURHAM TCC	287	243	85	42	2	0
EDGECOMBE CC	400	319	80	80	0	1
FAYETTEVILLE TCC	560	480	86	64	9	7
FORSYTH TCC	383	323	84	59	1	0
GASTON COLLEGE	337	265	79	31	1	40
GUILFORD TCC	386	312	81	74	0	0
HALIFAX CC	340	289	85	41	10	0
HAYWOOD CC	341	277	81	63	1	0
ISOTHERMAL CC	306	181	59	30	95	0
JAMES SPRUNT CC	357	284	80	61	8	4
JOHNSTON CC	313	271	87	37	5	0
LENOIR CC	398	329	83	63	6	0
MARTIN CC	332	301	91	11	0	20
MAYLAND CC	343	266	78	71	6	0
MCDOWELL TCC	261	211	81	50	0	0
MITCHELL CC	346	290	84	54	0	2
MONTGOMERY CC	307	243	79	57	7	0
NASH CC	327	248	76	63	16	0
PAMLICO CC	258	202	78	55	1	0
PIEDMONT CC	387	299	77	77	2	9
PITT CC	363	299	82	63	1	0
RANDOLPH CC	385	257	67	58	12	58

College	(a) Actual Sample	(b) Usable Questionnaire N	%	(c) Nonrespondents Absent	Refused	Other
RICHMOND CC	335	261	78	54	20	0
ROANOKE-CHOWAN CC	336	237	71	62	14	23
ROBESON CC	306	217	71	51	35	3
ROCKINGHAM CC	440	358	81	69	13	0
ROWAN-CABARRUS CC	358	273	76	70	9	6
SAMPSON CC	334	301	90	24	3	6
SANDHILLS CC	351	258	74	68	6	19
SOUTHEASTERN CC	295	215	73	42	33	5
SOUTHWESTERN CC	314	257	82	50	7	0
STANLY CC	430	358	83	64	8	0
SURRY CC	314	256	82	53	4	1
TRI-COUNTY CC	382	277	73	103	2	0
VANCE-GRANVILLE CC	362	308	85	54	0	0
WAKE TCC	281	227	81	54	0	0
WAYNE CC	263	213	81	31	10	9
WESTERN PIEDMONT CC	283	236	83	47	0	0
WILKES CC	313	271	87	42	0	0
WILSON COUNTY TC	354	311	88	36	5	2
	20,047	16,196	81	3,179	410	262

The mean response rate was 81 percent for the 58 participating colleges.

a Actual sample = number of students enrolled in sampled classes at the time of survey; excludes classes that had ended or been canceled and students who had dropped from the class after registration and prior to administration of the questionnaire.

b Usable questionnaires = number of questionnaires completed by students, edited, and scanned by computer; % = usable questionnaires divided by number in actual sample; [x] = mean percentage.

c Absent = number of students enrolled in sampled classes but not in class during the research instrument administration; refused = number of enrolled students present at time of research instrument administration but refusing to complete the questionnaire; other = number of students enrolled in sampled classes but not completing the questionnaire because the questionnaires were not administered to the students: due to the instructor's assessment they could not complete the questionnaire, due to the instructor's refusal to administrate the questionnaire, and due to not enough questionnaires delivered to the instructors.

Appendix F: Research Survey Instrument

NORTH CAROLINA
Department of Community Colleges
State Board of Community Colleges
and the
Department of Adult and Community College Education
North Carolina State University

1988-89 STUDENT PROFILE QUESTIONNAIRE

Your class has been randomly selected to participate in a survey of students in North Carolina community and technical colleges. The survey will provide very important information about student interests and needs, and help your college plan courses and services for students. It will also show how student profiles in community colleges have changed over the past twenty-five years.

Please read and answer each question carefully. For each answer, darken the circle completely. If you want to change an answer, erase your old answer completely and darken your new answer. This survey is voluntary and your answers will be kept completely confidential. Individuals will not be identified. Only group data will be reported.

IMPORTANT: Your answers will be scored by machine. Please use a Number 2 pencil. Fill in each circle completely, but do not mark outside the circle. Please do not fold or tear this questionnaire. THANK YOU FOR YOUR HELP!

EXAMPLE:

0. Can you use a pen to answer this questionnaire?
   - ○ Yes
   - ● No

1. **Class Number** (Ask your instructor for this class's code number. Write it below and darken the proper circles.)

2. **How many times have you answered this questionnaire?**
   - ○ This is my first time
   - ○ Two times
   - ○ Three times
   - ○ Four or more times

3. **Curriculum/Extension Code** (Ask your instructor for your program code. Write it below and darken the proper circles.)

4. **Sex**
   - ○ Female
   - ○ Male

5. **Race/Ethnic Background** (Mark one.)
   - ○ American Indian
   - ○ Asian
   - ○ Black
   - ○ Hispanic origin
   - ○ White
   - ○ Other

6. **Age** (Write your age in the boxes below and darken the proper circles.)

7. **Marital Status**
   - ○ Single, never married
   - ○ Married, not separated
   - ○ Separated
   - ○ Widowed
   - ○ Divorced

8. **Are you a military veteran?**
   - ○ Yes
   - ○ No

9. What was your final score on the GED exam?

- ○ Did not take GED exam
- ○ Below 225
- ○ 225-249
- ○ 250-274
- ○ 275-299
- ○ 300 or above

10. What was your grade average in high school? (Estimate.)

- ○ A
- ○ B
- ○ C
- ○ Below C
- ○ Completed GED
- ○ None of the above

11. What is your overall grade average at this college? (Estimate.)

- ○ Don't have one
- ○ Don't know
- ○ A
- ○ B
- ○ C
- ○ Below C

12. When do you actually attend and prefer to attend most (½ or more) of your classes? (Mark one under "actually attend" and one under "prefer to attend.")

Actually Attend		Prefer to Attend
○	Mornings	○
○	Afternoons	○
○	Evenings	○
○	Weekends	○

13. Where do you attend most (½ or more) of your classes?

- ○ Main campus
- ○ Workplace
- ○ Branch campus
- ○ Other off-campus site (church, school, residence)
- ○ Equally divided between on-campus and off-campus locations

14. How many different courses are you taking at this time? (Count each different ABE class, GED class or learning lab as one course.)

⓪①②③④⑤⑥⑦⑧⑨

15. How many credit hours are you taking this quarter?

- ○ Not taking courses for credit
- ○ 1-3 credit hours
- ○ 4-7 credit hours
- ○ 8-11 credit hours
- ○ 12-15 credit hours
- ○ 16-19 credit hours
- ○ 20 or more credit hours

16. How many clock hours per week are you in class this quarter?

- ○ 1-5
- ○ 6-10
- ○ 11-12
- ○ 13-15
- ○ 16-20
- ○ 21-25
- ○ 26-30
- ○ More than 30

17. Counting your current enrollment hours, what is the number of quarter hours you have taken at this institution? (Estimate. Write in below and darken the proper circles.)

18. How many quarters, including this quarter, have you been enrolled at this college?

- ○ First
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7
- ○ 8
- ○ 9 or more

19. What is the distance you usually travel (one way) to attend class?

- ○ 0-3 miles
- ○ 4-5 miles
- ○ 6-10 miles
- ○ 11-15 miles
- ○ 16-20 miles
- ○ 21-25 miles
- ○ 26-30 miles
- ○ 31-35 miles
- ○ 36-50 miles
- ○ Over 50 miles

20. How many trips do you make to school each week?

- ○ 1
- ○ 2
- ○ 3
- ○ 4
- ○ 5
- ○ 6
- ○ 7 or more

21. Have you ever been enrolled in a degree program at a four-year college or university?

- ○ Yes
- ○ No

22. What type of school setting or nonschool setting did you most recently attend before entering this college?

- ○ Kindergarten to high school
- ○ Another community college
- ○ Two-year private college
- ○ Public four-year college/ university
- ○ Private four-year college/ university
- ○ Vocational/trade school
- ○ Business/industry
- ○ Labor/professional association
- ○ Government agency
- ○ Community agency
- ○ Other

23. What is your primary educational goal while attending this college? (Mark one.)

- ○ To explore a new academic/ career area
- ○ To prepare for a first job/ career
- ○ To prepare for a different job/career
- ○ To update/improve skills for my current job
- ○ To prepare for transfer to a four-year college
- ○ For self-enrichment/personal interest/leisure
- ○ To cope with a major change in my life
- ○ To improve my basic skills in reading, writing, and/or mathematics

24. What is your primary graduation intention while attending this college? (Mark one.)

- ○ Complete selected courses, do not intend to graduate
- ○ Earn high school diploma/ GED
- ○ Earn a college diploma in a career program
- ○ Earn a college certificate in a career program
- ○ Earn an associate degree in a career program
- ○ Earn an associate degree in a college transfer program

25. What is the highest level of education you plan to obtain at any college?

- ○ High school diploma or GED
- ○ Vocational diploma
- ○ Technical (applied science) degree
- ○ Associate degree
- ○ Bachelor's degree
- ○ Master's degree
- ○ Doctorate
- ○ Other

26. Excluding yourself, what one person or source was most influential in your decision to attend this college? (Choose one.)

- ○ Recruiter, teacher, or some other staff member from this college
- ○ Literature from this college
- ○ Radio, TV, newspaper
- ○ Employer
- ○ Teacher or some other person at a four-year college or university
- ○ High school teacher, counselor, or coach
- ○ Parent
- ○ Spouse
- ○ Child
- ○ Some other relative
- ○ Current student at this college
- ○ Former student of this college
- ○ Friend who is not a student here
- ○ Social service agency counselor (public assistance, vocational rehabilitation, etc.)
- ○ Other person, not listed here

27. How did you first learn of the program or course in which you are now enrolled? (Choose one.)

- ○ Recruiter, teacher, or some other staff member from this college
- ○ Literature from this institution
- ○ Radio
- ○ TV
- ○ Newspaper
- ○ Employer
- ○ Teacher or staff member at a four-year college or university
- ○ High school teacher, counselor, or coach
- ○ Parent
- ○ Spouse
- ○ Child
- ○ Some other relative
- ○ Current student at this college
- ○ Former student of this college
- ○ Friend who is not a student here
- ○ Social service agency (public assistance, vocational rehabilitation, etc.)
- ○ Other, not listed here

28. How comfortable are you with the following situations/items at your college? (Mark a (1) if Very Uncomfortable, (2) if Not Comfortable, (3) if Comfortable, or (4) if Very Comfortable.)

Very Uncomfortable	Not Comfortable	Comfortable	Very Comfortable	
①	②	③	④	Race relations climate
①	②	③	④	Presence of other people like me that I can relate to
①	②	③	④	Black presence (students, faculty, administrators, literature)
①	②	③	④	Talking with counselors
①	②	③	④	Talking with instructors about your performance in class
①	②	③	④	Age of students in my classes
①	②	③	④	Sex of students in my classes
①	②	③	④	Academic ability of students in my classes
①	②	③	④	Occupational status of the students in my classes
①	②	③	④	Social status of students in my classes

29. Would you have attended another educational institution this year if this community college had not existed?

- ○ Yes
- ○ No

30. Select the five major reasons that make it difficult for people like you to attend this college. (Mark the five major reasons.)

- ○ Cost (tuition, fees, books, course supplies)
- ○ Job responsibilities
- ○ No childcare
- ○ No transportation
- ○ Friends or family do not support the idea of attending
- ○ Amount of time required to complete program
- ○ Courses not scheduled at convenient times
- ○ Home responsibilities
- ○ Too far to travel
- ○ Negative image of vocational occupations
- ○ Strict attendance requirements
- ○ Not enough information on program offerings
- ○ Desired courses are not offered
- ○ Too much "red tape" in getting enrolled
- ○ Feel too old to go back to school
- ○ Low grades in past, not confident of my ability
- ○ Do not know what program to pursue
- ○ Not enough time
- ○ Do not want to come full-time
- ○ Not enough energy and stamina
- ○ Do not enjoy studying
- ○ College not sensitive to people like me
- ○ Race relations climate
- ○ Required testing for admission
- ○ Other, not listed

31. Would you recommend this college to a friend?

- ○ Yes
- ○ Yes, with reservations
- ○ No

32. Where do you live while enrolled at this college?

- ○ With parents
- ○ With spouse and children, if any
- ○ With children, but not spouse
- ○ With other relatives
- ○ Board with a family, not relatives
- ○ By myself
- ○ With friend(s)/roommate(s)
- ○ Other residence, not listed here

33. Did you have to change your residence in order to attend this college?

- ○ No, this college is located in my home county.
- ○ No, I am from another North Carolina county and I commute to class.
- ○ No, I moved here for reasons other than enrolling in this college.
- ○ Yes, I moved here from another North Carolina county in order to enroll in this college.
- ○ Yes, I moved here from out of state in order to enroll in this college.
- ○ Yes, I am a citizen of another country and came here to study.

34. What is the highest level of education you (Y) have completed? your father (F) has completed? your mother (M) has completed? (Please answer for each, even if your parents are no longer living. Estimate if you are not sure.)

You	Father	Mother	
Ⓨ	Ⓕ	Ⓜ	8th grade or less
Ⓨ	Ⓕ	Ⓜ	9th-11th grade
Ⓨ	Ⓕ	Ⓜ	High school
Ⓨ	Ⓕ	Ⓜ	GED diploma
Ⓨ	Ⓕ	Ⓜ	One year beyond high school
Ⓨ	Ⓕ	Ⓜ	Diploma program
Ⓨ	Ⓕ	Ⓜ	Two years of college
Ⓨ	Ⓕ	Ⓜ	Associate degree
Ⓨ	Ⓕ	Ⓜ	Three years of college
Ⓨ	Ⓕ	Ⓜ	College graduate
Ⓨ	Ⓕ	Ⓜ	Graduate work

35. What is your primary employment status? (Mark only one.)

- ○ Employed full-time
- ○ Employed part-time
- ○ Full-time student
- ○ Homemaker
- ○ Retired
- ○ Unemployed, actively seeking employment
- ○ Unemployed, not seeking employment
- ○ Active duty, guard/selected reserve

36. How many hours a week do you work for wages/salary? (Estimate. Mark one.)

- ○ Not a wage/salary earner
- ○ Under 5 hours
- ○ 5-9 hours
- ○ 10-19 hours
- ○ 20-29 hours
- ○ 30-39 hours
- ○ 40-44 hours
- ○ 45-49 hours
- ○ More than 49 hours

37. What was the total income for you — and your spouse, if you are married — from all sources before taxes during the past year (1987)? [Mark the (Y) column for your household and the (P) column for your parents. Estimate if you are not sure.]

Your household	Parents' household	
Ⓨ	Ⓟ	$0-$4,999
Ⓨ	Ⓟ	$5,000-$7,499
Ⓨ	Ⓟ	$7,500-$9,999
Ⓨ	Ⓟ	$10,000-$14,999
Ⓨ	Ⓟ	$15,000-$19,999
Ⓨ	Ⓟ	$20,000-$24,999
Ⓨ	Ⓟ	$25,000-$29,999
Ⓨ	Ⓟ	$30,000-$39,999
Ⓨ	Ⓟ	$40,000-$49,999
Ⓨ	Ⓟ	$50,000-$59,999
Ⓨ	Ⓟ	$60,000-$69,999
Ⓨ	Ⓟ	$70,000-$79,999
Ⓨ	Ⓟ	$80,000-$89,999
Ⓨ	Ⓟ	$90,000-$99,999
Ⓨ	Ⓟ	$100,000 or more
	Ⓟ	Parents no longer living

38. What are your major and minor sources of income? [Mark the major sources as (1) and the minor sources as (2).]

Major	Minor	
①	②	Full-time employment
①	②	Part-time employment
①	②	Parent(s)/guardian(s)
①	②	Spouse
①	②	Other relative(s)
①	②	Savings
①	②	Retirement (Social Security, VA, etc.)
①	②	Public assistance
①	②	Financial aid
①	②	Other sources

39. How many people in your household depend on you for more than half their financial support? (Mark the number of dependents in each age group.)

					⓪ No dependents
①	②	③	④	⑤	Under 5 years
①	②	③	④	⑤	5-9 years
①	②	③	④	⑤	10-14 years
①	②	③	④	⑤	15-19 years
①	②	③	④	⑤	20-24 years
①	②	③	④	⑤	25 and older

40. Do you pay for child care in order to attend this college?

- ○ No, I do not need child care.
- ○ No, child care expenses paid by another source.
- ○ No, child care provided at no expense.
- ○ Yes, less than $50 per month
- ○ Yes, $50-$99 per month
- ○ Yes, $100-$149 per month
- ○ Yes, $150-$199 per month
- ○ Yes, $200-$249 per month
- ○ Yes, $250 or more per month

41. How much did you spend on books and supplies this quarter for all of your classes? (Estimate.)

- ○ No expense
- ○ Under $50
- ○ $50-$99
- ○ $100-$149
- ○ $150-$199
- ○ $200-$249
- ○ $250-$299
- ○ $300-$499
- ○ $500 or more

42. What are your current sources of financial aid? (Mark all that apply.)

- ○ Not receiving financial aid
- ○ Job Training Partnership Act (JTPA)
- ○ Pell Grant
- ○ Supplemental Educational Opportunity Grant (SEOG)
- ○ Educational loan
- ○ Scholarship
- ○ Veterans Administration educational benefits
- ○ N.C. student incentive grant
- ○ College work-study program
- ○ Vocational rehabilitation
- ○ Employer tuition assistance

43. What is the total amount of financial aid (listed in the previous question) you expect to receive during the 1988-89 school year? (Estimate.)

- ○ Not receiving financial aid
- ○ Under $200
- ○ $200 - $399
- ○ $400 - $699
- ○ $700 - $999
- ○ $1,000 - $1,499
- ○ $1,500 - $1,999
- ○ $2,000 - $2,499
- ○ $2,500 - $2,999
- ○ $3,000 - $3,999
- ○ $4,000 or more

44. Choose the response below which best describes your employment plans after your course of study.

- ○ Work in the area that the college serves
- ○ Probably or definitely work in North Carolina
- ○ Work in another state
- ○ Military service
- ○ Keeping house
- ○ Retirement
- ○ Other

45. Who is considered the head of your family or household?

- ○ Your father
- ○ Your mother
- ○ Yourself
- ○ Your spouse
- ○ Other relative
- ○ Other person, not listed here

46. Which category below is the best description of the occupation or job held by the head of your household? (Read the entire list and then choose one category.)

- ○ Accountant and auditor
- ○ Adjuster and investigator
- ○ Bank teller
- ○ Buyer and purchasing agent
- ○ Cleaning service: maid, janitor
- ○ Clergy
- ○ Clerk: order, file, records, shipping and receiving, stock
- ○ Computer equipment operator
- ○ Computer programmer
- ○ Construction laborer
- ○ Construction trades: brickmason, stonemason, carpenter, electrician, painter, plumber
- ○ Domestic: cleaner, child care worker in private home
- ○ Driver: truck, bus, delivery truck, industrial equipment
- ○ Education: administrator
- ○ Education: teacher, counselor, librarian
- ○ Education: teacher's aide, library clerk
- ○ Engineer
- ○ Engineering technician: electrical and electronic, drafting
- ○ Farm owner/operator
- ○ Farm worker
- ○ Fisher, hunter, and trapper
- ○ Food production: butcher and meat cutter
- ○ Food service: waiter and waitress, cook, assistant
- ○ Freight, stock, and material handler
- ○ Garage and service station attendant, vehicle cleaner
- ○ Groundskeeper and gardener
- ○ Health: physician, dentist, registered nurse, pharmacist, therapist
- ○ Health service: dental assistant, nurse aide, orderly, attendant
- ○ Health technician: licensed practical nurse, dental hygienist
- ○ Homemaker
- ○ Inspector and compliance officer
- ○ Lawyer and judge
- ○ Machine operator: winding, twisting, knitting, sewing, grinding, buffing, painting, cutting, metalworking, laundering and dry cleaning, welding
- ○ Manager, administrator
- ○ Manager, self-employed
- ○ Manufacturing crafts: machinist, sheet metal worker, cabinet maker, furniture and wood finisher, dressmaker, upholsterer
- ○ Mechanic and repairer: auto, bus, truck, industrial machinery
- ○ Office: secretary, typist, receptionist, bookkeeper, payroll and timekeeping
- ○ Personal service: barber, hairdresser and cosmetologist, child care worker
- ○ Personnel, training, and labor relations specialist
- ○ Postal clerk, mail carrier
- ○ Protective service: police, firefighter, guard
- ○ Sales: supervisor, insurance, real estate, representative
- ○ Sales worker: cashier, door-to-door, automotive, apparel
- ○ Science technician
- ○ Scientist: computer, natural, mathematical, social
- ○ Social worker
- ○ Telephone operator
- ○ Timber cutter and logger
- ○ Writer, artist, entertainer
- ○ Student, retired, unemployed
- ○ Other, not listed here

47. Why did you decide to continue your education? [Read the list below and choose the five most important reasons you decided to continue your education. Mark **(1)** next to the most important reason. Mark **(2)** next to the second most important reason. Mark **(3)** next to the third most important. Mark **(4)** next to the fourth most important and **(5)** next to the fifth. Mark five reasons only.]

① ② ③ ④ ⑤ To be able to contribute more to society
① ② ③ ④ ⑤ To be able to earn more money
① ② ③ ④ ⑤ To become more cultured
① ② ③ ④ ⑤ To gain a general education
① ② ③ ④ ⑤ To get a better job
① ② ③ ④ ⑤ To improve basic skills in reading, writing, and/or mathematics
① ② ③ ④ ⑤ To improve my social life
① ② ③ ④ ⑤ To learn more things of interest
① ② ③ ④ ⑤ To meet interesting people
① ② ③ ④ ⑤ My parents or spouse wanted me to go
① ② ③ ④ ⑤ There was nothing better to do
① ② ③ ④ ⑤ Tired of what I have been doing

48. What five things about this community college influenced you most in deciding to attend? [Choose the five most important reasons and rank them as you did in the previous question. Rank from **(1)** most important to **(5)** fifth most important. Mark five reasons.]

① ② ③ ④ ⑤ Educational programs or courses available
① ② ③ ④ ⑤ Financial assistance was available
① ② ③ ④ ⑤ Job placement services
① ② ③ ④ ⑤ Location (nearest to home or work)
① ② ③ ④ ⑤ Low cost
① ② ③ ④ ⑤ Open-door admissions policy
① ② ③ ④ ⑤ Quality of instruction
① ② ③ ④ ⑤ Student-centered instruction and activities
① ② ③ ④ ⑤ College's reputation
① ② ③ ④ ⑤ Academically unable to attend another college
① ② ③ ④ ⑤ Convenient class schedule
① ② ③ ④ ⑤ Child care was available
① ② ③ ④ ⑤ Other reasons, not listed here

49. Choose only three of the following seven educational institutions, in order of preference, assuming you could attend any one of them. [Darken a **(1)** for your first choice, a **(2)** for your second choice, and a **(3)** for your third choice.]

① ② ③ This community college
① ② ③ Another community college
① ② ③ A private two-year college
① ② ③ A private trade or professional school
① ② ③ A public four-year college or university
① ② ③ A private four-year college or university
① ② ③ Another type of school not listed

50. Please indicate the quality of services and facilities at this college. Select the best response for each item listed below.

Not Aware Service/Facilities Existed	Didn't Use Service	Used, but Dissatisfied with Service	Used, and Satisfied with Service	
①	②	③	④	Academic counseling
①	②	③	④	Classrooms, shops, laboratories
①	②	③	④	Child care
①	②	③	④	Clubs, student organizations
①	②	③	④	Cooperative education program
①	②	③	④	Eating facilities
①	②	③	④	Financial aid to pay tuition
①	②	③	④	Financial aid to live on
①	②	③	④	Health care
①	②	③	④	Job counseling
①	②	③	④	Job placement service
①	②	③	④	Library
①	②	③	④	Math skills programs
①	②	③	④	Transportation
①	②	③	④	Parking
①	②	③	④	Personal counseling
①	②	③	④	Reading skills program
①	②	③	④	Recreation facilities
①	②	③	④	Student center, lounge area
①	②	③	④	Study skills program
①	②	③	④	Test anxiety workshops
①	②	③	④	Time management workshops
①	②	③	④	Tools and equipment
①	②	③	④	Tutoring services
①	②	③	④	Campus security
①	②	③	④	Quality of instruction
①	②	③	④	College's overall image
①	②	③	④	Study and reading areas

Appendix G: Pretest Findings and Reliability of Research Instrument Responses

The process of pretesting the questionnaire was in two phases. The initial draft of the research instrument was pretested with 30 students at Wake Technical Community College and 28 students at Central Carolina Community College during July, 1988. Following this pretest activity, the data were analyzed and revisions made to the questionnaire. The second phase of pretesting included 49 students at Durham Technical Community College, 22 students at Piedmont Community College, and 30 students at Nash County Community College.

The total pretest sample of 159 students, included curriculum and continuing education students enrolled in 13 classes at five community college campuses. Students completed an evaluation sheet after finishing the questionnaire.

Item Reliability

Reliability of a question is concerned with whether the data are dependable or consistent (O'Sullivan and Rassel, 1989). Item reliability was estimated by calculating the percentage of usable responses during pretesting. Questions that were unanswered or were answered incorrectly (e.g., two responses given when only one was allowed) by less than 95% of the respondents were:

Phase One of Pretesting

Question Number & Content	Usable Responses %	Change
13b. Prefer to attend classes	73	Rewrote
16. Number of courses	90	None
20. Type of school	93	None
22. Current enrollment hours	83	Rewrote
24. Person influenced decision	83	None
25. Rate influence of decision	90	None
26. Best methods	93	None
27. Choice of college	63	Rewrote
28. Reasons to continue education	76	Rewrote
35. Reasons that prevent attending	90	None
36. Live while enrolled	93	None

40.	Planned highest level	90	None
42.	Current sources of income	56	Rewrote
43.	Current sources of financial aid	88	None
44.	Total amount of financial aid	90	Rewrote
45.	Spend on books and supplies	93	None
46.	Head of family/household	87	None
47.	Pay for child care	90	None
48.	Income, student	88	None
	Income, spouse	38	None
	Income, parent(s)	66	None
49.	Employment status	87	None
50.	Hours worked per week	92	None
51.	Occupation head of household	73	None
52.	Future employment plans	83	None

As a result of the analysis of data received from the first phase of pretesting, questions 13b, 22, 27, 28, 42, and 44 were rewritten. No questions were deleted.

Phase Two of Pretesting

Question Number & Content		Usable Responses %	Change
3.	Times answered	82	None
13a.	Actually attend classes	82	None
13b.	Prefer to attend classes	86	None
16.	Number of courses	91	None
20.	Type of school	81	Rewrote
21.	Current enrollment hours	74	None
22.	Quarters enrolled	92	None
35.	Planned highest level	87	None
36.	Completed level of education	90	None
37.	Income, student	79	None
	Income, spouse	55	Delete
	Income, parent(s)	67	None
38.	Sources of income	95	None
39.	Total amount of financial aid	93	None
40.	Primary employment status	93	None
43.	Sources of financial aid	94	None
44.	Future employment plans	90	Rewrote
45.	Head of family/household	93	None

46.	Occupation head of household	77	None
47.	Level of influence on decision	77	Rewrote
48.	Choice of college	80	None
49.	Satisfaction with characteristics	77	Delete
50.	Reasons to continue education	82	None

During the analysis of the data from the second phase of pretesting, the research team deleted questions 1, 26, 27, 30, 33, 37b, and 51. To lessen student's concern with providing private information, the question requesting a social security number was deleted.

Student Reactions: Findings from the evaluation sheets

1. 89% stated the directions were easy to follow,
   11% stated the directions were a little hard;
2. 92% stated there were no questions they did not understand,
   8% stated there were questions they did not understand;
3. 72% stated there were no questions they could not answer,
   28% stated there were questions they could not answer;
4. 76% stated there were no questions they did not want to answer,
   24% indicated there were questions they did not want to answer.

Some students expressed unwillingness to give personal data: social security number, education level, financial information. Information on parent's income or parent's educational level were viewed as irrelevant to the survey.

Operational Validity of the Research Instrument

Operational validity is used to discuss the validity of the research instrument in contrast to the internal and external validity notions of experimental research (O'Sullivan & Rassel, 1989). The question of operational validity is "does this measure actually produce data on the variable(s) of interest?" Face validity, a type of operational validity, is assessed by the evaluator's study of the concept to be measured and a determination as to whether this research instrument measures that concept (Bailey, 1987).

The questionnaire used in this survey was an expanded version of the questionnaires used in the 1974 and 1979 profile studies. The responses to questions were modified

and updated as necessary. Issues of comparability were fundamental to these modifications.

Face validity of the research instrument was established by three separate groups of evaluators: (a) an advisory council of the North Carolina Department of Community Colleges, (b) college coordinators from the 58 community colleges, and (c) the project research team composed of the project director and graduate students who had research interest and/or work experience in the community college system. Evaluators were asked (a) to judge the correctness and completeness of the responses given to questions, (b) to evaluate the degree to which they would expect students to understand the questions and the responses, and (c) to specify changes or updates to the 1979 questionnaire.

Along with written evaluations provided by the above stated groups, the research project team consulted the literature for evidence on the appropriateness of responses given for selected questions. Experts reviewed the responses provided for questions related to financial aid, curriculum/continuing education code, occupational categories and other sociological facts.

The question asking respondents to indicate the occupation of the head of household was revised. The response choices (occupational categories) were derived from the 1980 Census of Population, U.S. Department of Commerce, Bureau of the Census, Volume 1, Characteristics of the Population, Part 35--North Carolina, Table 185, pp. 552-576. All intermediate occupation categories that included 0.1% or more of the employed North Carolina population in 1980 were selected for a total of 49 categories. Three additional categories, "homemaker", "student, retired, unemployed", and "other, not listed here" were added for a total of 52 categories.

Reliability of Research Instrument Responses

Nonresponses/ Incorrect Responses

The following is an enumeration of nonresponses to questions and nonpermissable responses, e.g. cases in which two or more answers were given to a question when only one answer was allowed. Questions allowing more than one response (such as ranking, or choose-all-that-apply) cannot be evaluated in the same manner as forced-choice questions. Percentage values were calculated from nonresponses only. Numbers were taken from the unweighted data:

Total curriculum students: 12,536
Total continuing education students: 3,660
Total of usable questionnaires: 16,196

Question Number	Nonresponse N	Nonresponse %	Nonpermissible N
1	0	0.0	0
2	283	1.7	0
3	0	0.0	0
4	107	0.7	0
5	147	0.9	1
6	107	0.7	8
7	76	0.4	6
8	120	0.7	1
9	853	5.3	6
10	139	0.8	32
11	296	1.8	2
12	144	0.8	1193
13	216	1.3	15
14	321	1.9	4
15	319	1.9	6
16	233	1.4	4
17	1,623	10.0	10
18	418	2.5	8
19	143	0.8	3
20	165	1.0	3
21	131	0.8	0
22	414	2.5	121

Question Number	Nonresponse N	Nonresponse %	Nonpermissible N
23	200	1.2	111
24	459	2.8	19
25	589	3.6	33
26	290	1.7	88
27	147	0.9	64
28	233	1.4	24
29	258	1.5	2
30	0	0.0	0
31	620	3.8	4
32	147	0.9	30
33	229	1.4	7
34	199	1.2	9
35	136	0.8	95
36	437	2.7	27
37	1,368	8.4	76
38	0	0.0	0
39	0	0.0	0
40	428	2.6	14
41	255	1.6	8
42	0	0.0	0
43	455	2.8	17
44	332	2.0	64
45	265	1.6	113
46	344	2.1	203
47	0	0.0	0
48	0	0.0	0
49	0	0.0	0
50	0	0.0	0

Appendix H: Expansion Factors

Expansion factors (also called weights) were used to adjust sample data to estimate percents of the statewide population of community college students on relevant variables. The expansion formula was provided by Dr. Charles Proctor, statistical consultant for this research project.

The expansion formula was as follows:

$$\left(\frac{Ni}{n_i}\right)\left(\frac{I}{c_{ijk}}\right)\left(\frac{L_{ij}}{l_{ij}}\right)\left(\frac{A_i}{a_i}\right)\left(\frac{TCur_i}{SCur_i}\right)$$

Explanation of the above formula:

Factor 1: Classes Expansion Factor

N_i = population number of classes at ith college

n_i = sample size of classes selected at ith college

Factor 2: Appearance Expansion Factor

c_{ijk} = number of classes taken by kth listed student in the jth sample class at ith college

Factor 3: Appearance Non-response Expansion Factor

L_{ij} = number of appearances (listings) on the jth class at ith college

l_{ij} = number of responses from jth class at ith college

Factor 4: Whole-Class Non-Response Expansion Factor

A_i = number of appearances on all n_i class lists

a_i = the number for A_i minus appearances on any classes in which the whole class was non-response

Factor 5: Institutional Expansion Factor

$TCur_i$ = number of curriculum students enrolled at ith college

$SCur_i$ = number of curriculum students who completed usable questionnaires at ith college

Expansion factors were introduced into the data analysis for the following three reasons: (a) the variations in the size of individual colleges; (b) the probability of a student being selected into the sample; and (c) the actuality of non-response and non-coverage of individuals selected into the sample.

Because the data from all 58 colleges were combined to develop a statewide profile, it was necessary to expand the sample data to account for variations in the individual colleges, and hence the contribution that each made to the statewide profile. The Classes Expansion Factor adjusted the data for variations in the number of classes offered at each individual college during the fall term, 1988. The Institutional Expansion Factor adjusted the data for variations in the curriculum student enrollments at each individual college during the fall term, 1988.

In sample theory a sampling frame is perfect if every element (i.e. student) appears on the list separately, once, and only once (Kish, 1965). Because intact classes were the sampling units in this research project, a student's probability of being included in the sample depended upon the number of classes in which he/she was enrolled. To prevent distortion in the findings that would result from these unequal probabilities, each individual's responses were expanded by the Appearance Expansion Factor. Expanding each respondent's observations by the inverse of the number of courses in which enrolled (Question 14) compensated for unequal probabilities.

A sampling frame basic problem is created by non-response or non-coverage. Expansion factors were introduced to reduce the influence due to non-response or non-coverage. The Appearances Non-response Expansion Factor adjusted the sample data by accounting for members of a class which did not respond to a questionnaire. The Whole Class Non-response Expansion Factor adjusted the sample data by accounting for whole classes of students which did not respond to the questionnaire.

The data used for calculating the expansion formula were derived from the questionnaires, the College Coordinator's Summary Sheet, the Instructor's Summary Sheet, and the Sampling Work Sheet from each individual college.

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